THE ARCHITECTURE OF HASSAN FATHY: BETWEEN WESTERN AND NON-WESTERN PERSPECTIVES

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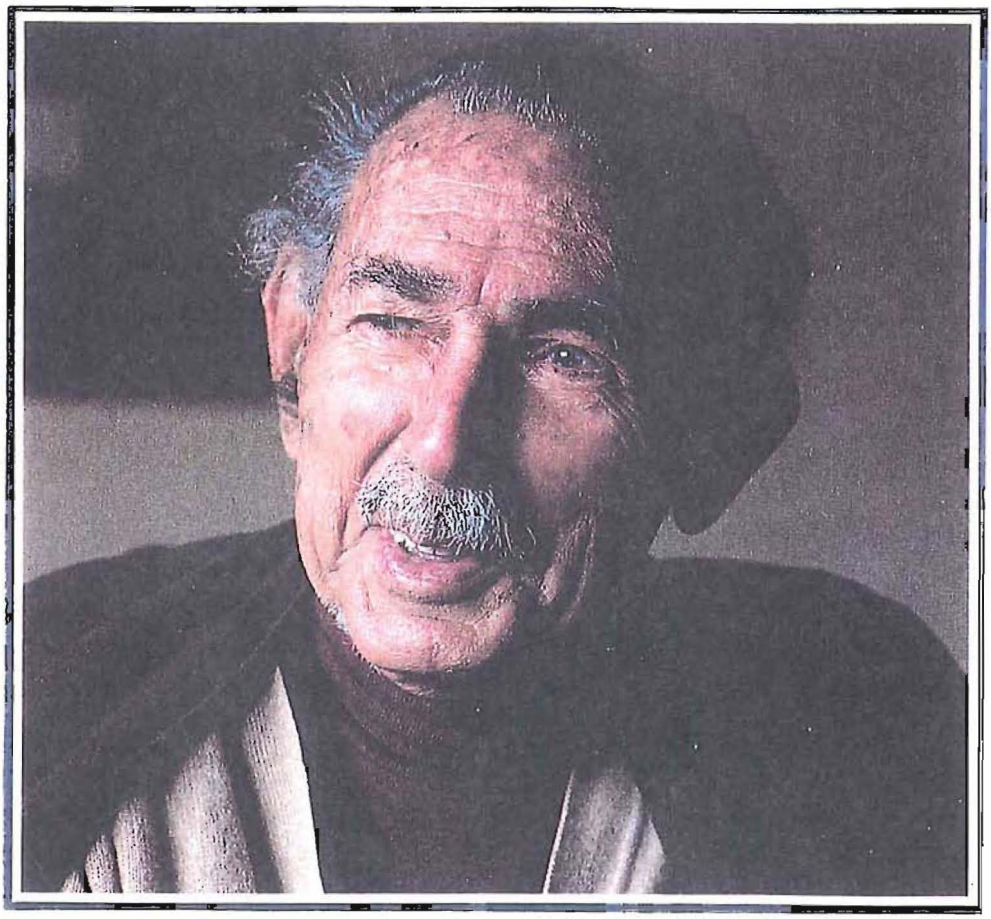
Volume One



Hassan Fathy

(c. 1984)

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ABSTRACT

This thesis examines the career of the Egyptian architect, Hassan Fathy (1900-1989). Part one deals with Fathy's biography. It contains an account of his family background, his childhood and education, the influences of the Egyptian vernacular and Islamic architecture which helped shape his identity and the influences of modern architectural movements on his early works. It also outlines the development of his nationalistic attitude and personal architectural approach within the context of Egypt's cultural and intellectual history. An examination of his work and theories during the period from 1957 to 1962 when he worked with Doxiadis Associates in Athens; the events surrounding the establishment of Fathy's Institute for Appropriate Technology in 1976 and an assessment of his architecture at the time of his death are also included.

The fifth and sixth chapters examine the formal vocabulary of his buildings and projects and the design principles of his village planning. Chapter seven focuses on the complexity of Fathy's architecture and the richness and range of its theoretical intentions. It also assesses Fathy's attitudes towards modernism and the International Style, issues such as auto-colonialism and symbolism in architecture and critical responses to his works and philosophy. The relationship of his philosophy to movements such as Post-modernism, community architecture and self-help building, eco-architecture and sustainability and tendencies such as neo-vernacular and earth building are also examined. This reveals the significance of Fathy's approach while placing him within the wider perspective of twentieth-century architecture.

The thesis argues that Fathy is one of the most important architects of the twentieth century, whose works have had a widespread influence on the architecture of the Islamic world and whose ideas have extended to the Western world. Chapter eight examines the ways in which architects in both the Western and non-western worlds view Fathy's ideas and works. It distinguishes those architects who have opted to use literal references from his work in an eclectic fashion from those who have made more considered responses to his ideals and principles. A catalogue of Fathy's buildings and projects and a comprehensive bibliography of Fathy's published and unpublished writings are included.

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INTRODUCTION

> ... civilisation is far too old and complicated for a clean sweep. It runs back for thousands of years, and in all those years man has been building up certain instinctive preferences or prejudices, if you like, which lie at the back of consciousness. They may be stamped out for a time, but they will inevitably play their part again.
>
> (R. Blomfield, Is Modern Architecture on the Right Track. *The Listner*, 1933)[1]

The Egyptian architect and master builder, Hassan Fathy (1900-1989) was one of the first architects to break with modern architecture and to found a new approach based on a conception of interpreting forms and masses from the past. He was unique in believing that this language could exist alongside that of an aggressively modern one that cut all ties with the past. In addition to Fathy's tireless efforts to establish his traditional approach, throughout his life he struggled to improve the housing and living environments of the poor, especially in the Third World. Fathy's efforts were acknowledged by several awards, including the Chairman's Prize, Aga Khan Awards for Architecture (1980), the Right Livelihood Award (1980) and the first Gold Medal of the International Union of Architects (1984).

The sheer span of time involved in Fathy's career, from 1927 to 1989, makes the study of his architecture fascinating as well as problematic. Fathy's career encompassed the development of modern architecture and the International Style from the 1930s to the 1970s, as well as the formulation of the Postmodern Movement from the 1970s onward. Born in 1900, Fathy was of a slightly younger generation than Walter Gropius (1883-1969), Ludwig Mies van der Rohe (1886-1969), Le Corbusier (1887-1965) and Richard Buckminster Fuller (1895-1983). He was almost an exact contemporary of key figures in the development of modern architecture including, Alvar Aalto (1898-1976), Louis Khan (1901-1974) and Philip Johnson (b.1906). Fathy's career also extended to overlap with the next generation of postmodernists architects including Charles Moore (1925-1974), Robert Venturi (b.1925), Aldo Rossi (b.1931) and Michael Graves (b.1934).

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1 Quoted in William J. R. Curtis, *Modern Architecture Since 1900*. Oxford, 1987, p. 243.

In order to understand Fathy's life and career, and to explain the origins and much of the evolution of his thinking as well as his nationalist attitude, an understanding of the historical circumstances within which he lived, is necessary. A brief history of modern Egypt and the many transformations in Egyptian nationalist orientations over time will clarify how Fathy perceived his own identity and how he tried to realise his nationalist beliefs in the world around him. Fathy was born when Egypt was under British occupation and ruled by the Egyptian crown. The extensive foreign involvement in Egyptian affairs had brought into the country a large number of people whose way of life differed from that of the native Egyptian. This also brought to Egypt different architectural styles, which Fathy regarded as inappropriate and a threat to Egypt's culture.

Egypt was characterised by its conservatism and a long-established traditional social structure which formed what could be called 'Egyptianity'. Rural communities are one of the most essential features of this Egyptianity which reflect the life style and historical conditioning of the Egyptian. Throughout history, this Egyptianity had been affected by a series of invasions by foreign conquerors, which were underlined by three essential events. These were the Arab-Islamic conquest in the 7th century, the non-Arab-Islamic conquests from the twelfth to the sixteenth centuries and the European encroachments beginning with Napoleon's invasion in 1798.[2]

The crowning event in establishing a brilliant period of Islamic civilisation and a prosperous centre of Islamic culture was during the Fatimid dynasty that ruled Egypt from 969 to 1171. During this period the Islamic character of Egypt, especially its capital Cairo, emerged, represented still in the architecture of the houses and mosques of the Fatimid era.[3] Old medieval Cairo was the city which influenced Fathy and in which he spent his formative years and the most productive part of his career as a professional architect. The emergence and development of modernity in Egypt began with Napoleon's invasion in 1798. One of the important achievements of the French expedition (1798-1801) was the introduction of an Arabic printing press. Egypt witnessed a new era of publications such as the political journal, *Courrier de L'Egypt*,

2 P. J. Vatikiotis, *The History of Egypt: from Muhammad Ali to Sadat*. London, 1980, pp. 9-10.
3 Ibid., p. 16.

and the scientific and economic journal, *La Décade Egyptienne*, which were to have a remarkable impact upon the intellectual and political evolution of Egypt in the 19th century.[4]

Although Napoleon's campaign was mainly a military strike against the British, it was accompanied by scholars from different disciplines including science, archaeology, history and linguistics. Their research, which covered many aspects of the Egyptian's life, was compiled in the 23 volume *Description de L'Egypt*, published between 1809 and 1828. It included a detailed analysis of the architecture of Cairo from the medieval period up to the modern world. Janet Abu-Lughod believes that "any student of Cairo's development must be eternally grateful for [Napoleon's] military blunder" of invading Egypt.[5] Inevitably, the *Description de L'Egypt* was an important source for Fathy during his analysis of the typology of Islamic architecture.

The French occupation was ended by the Ottoman Turks in 1801 and Egypt was ruled by Muhammad Ali, from 1805 to 1848. Ali's rule gave a massive impetus to the emergence of modern Egypt as he was the first ruler in Islamic countries to undertake tremendous economic development. Ali's desire for modernity led him to create a European style state school system and he sent Egyptians on educational missions to Italy, France and England for academic and technical training.[6] This movement of modernisation, according to Fathy, led Egypt to lose its "indigenous style". Fathy also believed that the "signature is missing; the houses... are without character, without an Egyptian accent. The tradition is lost... since Mohammed Ali cut the throat of the last Mamluk".[7]

Whereas Muhammad Ali believed that the establishment of his rule in Egypt depended upon a policy of European-style reform, his grandson, Khedive Ismail, wanted to make Egypt a part of Europe. "My country is no longer in Africa, it is in Europe". During the reign of Ismail (1863-1879) Egypt was introduced to the advantages of the modern

4 Ibid., pp. 41-42.
5 Janet Abu-Lughod, *Cairo: 1001 Years of the City Victorious*. New Jersey, 1971, p. 55.
6 Vatikiotis, 1980, pp. 52-59.
7 Hassan Fathy, *Architecture for the Poor: An Experiment in Rural Egypt*. Chicago, 1973, p. 19.

world and became a European-looking nation.[8] The European style was obvious in the development of arts, archaeology, music, poetry, public libraries and museums and learned societies and scholarly research. In fact, the work of Khedive Ismail constituted the real socio-political and intellectual basis for modern Egypt and affected the characteristics of the Egyptian nation.[9] Architecture also progressed and developed as is evidenced in the palaces and public buildings of that time. The most important achievements during Ismail's reign was the digging of the Suez Canal, which was designed and constructed by Ferdinand de Lesseps between 1859 and 1869.[10] At the opening de Lesseps announced, "The two ends of the globe get closer to each other... Oh West! Oh, East! Get closer, look at each other, recognise each other, greet each other, embrace each other!".[11] From this moment, the boundaries between the East and the West, between tradition and modernity and between self and other disappeared. This in turn increased western domination and attempts to re-construct Egypt as a modern or colonial state. Now one can understand why Fathy always associated the loss of Egyptian architectural traditions with "the collapse of cultural frontiers in the last century".[12]

During his 16 year reign, Ismail incurred $90-$100 million debt from Europe to finance his projects, but he soon lost control over finances. This gave European countries the opportunity to interfere extensively in Egypt's affairs in the name of the bondholders.[13] In 1879, political groups and societies had been formed to encourage the Khedive to withstand foreign financial control. Certain other journalists and intellectuals, such as Abdullah Al-Nadim, formed a society called *Misr Al-Fatat* (young Egypt), and published their periodical of the same name, in which they attacked foreign influence in Egypt. However, both England and France were not impressed by this solidarity and became more interested in the deposition of the Khedive Ismail. Consequently, they advised the khedive to abdicate in favour of his son. In 1879 the Ottoman Sultan deposed Ismail and he was succeeded by his son Tawfiq Pasha, who ruled Egypt until

8 Vatikiotis, 1980, pp. 73-76.
9 Ibid., pp. 82-84.
10 Abu-Lughod, 1971, pp. 102-105.
11 Quoted in Edward W. Said, *Orientalism*. London, 1978, p. 91.
12 Fathy, 1973, p. 19.
13 Vatikiotis, 1980, pp. 86, 89.

his death in 1892.[14] From 1879 to 1882, Egypt witnessed the first native opposition movement led by Ahmed Orabi, but this ended with the British occupation of Egypt on 14 September 1882. The British occupation again provoked native opposition to alien rule and fostered among Egyptians the aspiration to self-government. A nationalist orientation was developed by several leaders, whose efforts extended for about 70 years and culminated with the Egyptian revolution and Egypt's independence in 1952.[15]

The nationalistic atmosphere of the early twentieth century inevitably affected Fathy's thinking and was the impetus behind his search for cultural identity. Fathy's opposition to the concept of Westernisation was the result of the hegemony of the west on his country as well as the taken-for-granted idea that the East is inferior to the West. Fathy stated: "When Hitler classified the races, I was very worried, I decided that there is no superior race, there are only specialities of race".[16] Fathy's anti-westernisation attitude, which was reflected in his architecture, could be interpreted in the context of orientalism, which was thoroughly discussed by Edward Said in his *Orientalism* in 1978. Said defined "Orientalism" as "a Western style for dominating, restructuring, and having authority over the Orient".[17] Orientalism is mainly a British and French cultural enterprise based on the assumption that the relationship between West and East is a relationship of power, hegemony and domination.[18] Since antiquity the "Orient" was a European creation and represented the negative image of post-Enlightenment Europe. For Egypt, colonisation and Western imperialism was different before and after the British occupation. From the time of Napoleon, Egypt was an "academic example of Oriental backwardness", but it became "the triumph of English knowledge and power".[19] It is not my intention to discuss Fathy's architecture from the standpoint of Said's definition of 'Orientalism'. However, it is likely that Fathy's quest for an authentic vernacular architecture was not only to fashion architecture for the people but also an expression of his intention to liberate his country from ongoing westernisation during the second half of the twentieth century.

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14 Ibid., pp. 140-141.
15 Ibid., pp. 170-174. The history of the period between 1900 and Fathy's death will be discussed in the context of the chapters dealing with his life and career.
16 John Riddle, When Architecture and Health Join Hands. *Sketch*, February 1974, p. 42.
17 Said, 1978, p. 3.
18 Ibid., p. 5.
19 Ibid., p. 35.

Other intellectuals were the product of this period including the artist Hamid Said, for whom Fathy built a house in 1942. Like Fathy, Said's main concern was to establish a link between the modern world and Egyptian culture through the medium of art. In the early 1960s, he was asked by the Minister of Culture to write a book to represent his ideas. In his book *The Contemporary Art* (1962), Said argued that history is similar to nature and always needs reinterpretation. He explained that we make history when we highlight both its spirit and meaning and history makes us by defining the direction we follow in our life. "History is the way to understand the present, and the way to the hope in the future".[20] Like Said, the late Ramses Wissa Wassef (1911-1974), architect, weaver and former head of the Architectural Department at the School of Fine Art in Cairo, was also Fathy's close friend and shared with him the same traditional architectural approach. Wassef studied architecture in Paris, but although he was the product of the Beaux-Art educational system he was, like Fathy, concerned about national issues and the decline of the traditional architecture and handicrafts of Egypt.[21]

Like Said, Wassif was influenced by the teaching of the educator and sculptor Habib Gorgy, whose main concern was to establish a distinct Egyptian national character. Gorgy was Said's teacher and later became Wassef's father in law. Gorgy and Wassef taught a group of village children to weave tapestries according to the children's own designs. Their work has been exhibited in Europe and attracted the admiration of artists as well as critics.[22] Like Fathy, Wassef also was impressed and influenced by the buildings of the old parts of Cairo and believed that the "hideous fungus-like modern buildings" are going to destroy human sensibility. He found it difficult to explain, "why our own civilisation should produce such coldness and ugliness to replace the wealth of indigenous architecture".[23] Wassef sought an architecture that would be the product of the way of life of Egypt's people, traditions and climate and would express his country's national character. Wassef's philosophy and his rejection of mechanisation paralleled the ideas of both Said and Fathy. Their shared belief in the value of people co-operating to create their society formed a strong friendship between them.

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20 Interview with Hamid Said in 2000. See also his book , *The Contemporary Art.* Cairo, 1962, pp. 1 & 4.

21 Interview with Dr Ahmed Abdou, head of the Architectural Department, School of Fine Arts, 2000.

22 Fathy, 1973, pp. 34-35.

23 Shadia Iskandar, The Invention of Harrania Village. *Cairo Today*, v. 13, no. 9, September 1992, p. 139.

Among Fathy's contemporaries, the Nobel Prize-winning Egyptian novelist Najib Mahfouze (b.1911) also reflected this renaissance movement and the search for Egyptian identity in his writings. Both Fathy and Mahfouze were members of the Council of Literature and Arts. In a meeting with the author, Mahfouze argued that coincidentally, both Fathy's *A Tale of Two Villages* and his novel *Zoqaq El-midaq* (Alleyway) were translated into the French language in the early 1970s. He explains that Fathy visited the places, where the events of his novel had taken place and that on many occasions he discussed the details of the story with him. Although Mahfouze has not seen Fathy's work, he "admired the idea behind it".[24] Like Fathy, Mahfouze, has always been influenced by mediaeval Cairo in his writings. "I think there has to be an attachment to a place or a thing which could become a starting point for feelings".[25] Following the Egyptian revolution of 1952, Mahfouze wrote *Bayna Al-Qasrayn* (Between the Two Palaces), a trilogy through which he commented on modern Egypt. The trilogy provides an insight into the great transformation from the emptiness of inherited tradition to the challenges facing a new generation in revolt through portraying the lives of one fictional Cairene family between the two World Wars.[26] In this, both Fathy and Mahfouze shared the same belief that Egypt cannot be built on modern technology only, but it should also be moderated by tradition and social values. Certainly, history, whether in the hands of a great novelist or a sensitive architect, can preserve the memory for future generations.

However, medieval Cairo which inspired Fathy and Mahfous has experienced a radical change in its appearance from the time of Khedive Ismail to the present. Fathy argued that the new architecture had failed to acknowledge traditional architecture and had instead become preoccupied with technological advance. Because of this lack of tradition, Fathy believed that cities "are becoming more and more ugly. Every single new building manages to increase this ugliness, and every attempt to remedy the situation only underlines the ugliness more heavily".[27] Fathy always regarded modern Egypt's cities as if they were a group of people who do not play music well yet still

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24 Author's interview with Najib Mahfouze, 2000.

25 Ghada Ragab, A Concerned Citizen: A Profile of the 1988 Nobel Laureate for Literature. *Cairo Today*, January 1989, p. 30.

26 Israel Gershoni & James P. Jankowski, *Egypt, Islam, and the Arabs: The Search for Egyptian Nationhood, 1900-1930*. New York, 1986, p. 32.

27 Fathy, 1973, p. 20.

insisted on forming a band. However, all the buildings and the architecture became grotesque.[28] In Fathy's opinion, the architecture of Cairo should match its cultural and technological milieu exactly as had happened at certain key points in history. In his article "Cairo of the 21st century", Fathy wrote

> my new dream is the utopian city... which novelists spoke about... and envisaged in their dreams and books... let it be Cairo of the 21st century whose planning would be based on humanistic principles... and respect of aesthetic aspects which were forgotten within the technological modern life.[29]

Fathy's insistence on restoring traditional values led many architects and critics to regard him as living out a romantic dream in a world of his own, a perception that was tellingly summarised by Prince Charles: "for forty years [Fathy] has had to put up with persistent vitriolic criticism and denigration by the modernist architectural establishment because he continued to espouse the cause of traditional Islamic architecture".[30] Many academics believe that Fathy's traditional approach and his style seem out of tune with the prosperous economies and internationalism of large cities and suggest that it is only appropriate to development in rural areas. Critics have also assumed that Fathy is unquestioningly opposed to all that it is modern. In an interview with Fathy, Yorick Blumenfeld suggested that Fathy's condemnation of modernism was "nostalgia for the past" and wondered if someone "can move backwards". Fathy believed that one cannot go backwards, but should "bring back the old architecture and move forward". "I feel the old architecture has value, so why should I change it?" Fathy explained that if new ideas proved better than the old, then architects "may break new ground".[31] In this, Fathy was not advocating reclamation of tradition at the expense of modernism; rather he was deeply committed to a reinterpretation of the Egyptian vernacular and the Islamic-Arabic house in the language of the era if it is necessary. It is within this cultural framework that Fathy's work should be viewed.

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28 Amr Abdel-Samea, Father of Architecture in Egypt Speaks. *Al-Ahram*, 20 May 1979, p. 11. (in Arabic)

29 Hassan Osman, Cairo of the 21st Century. *Al-Gumhuriya*, 2 February 1967, p. 11. (in Arabic)

30 Charles, Prince of Wales, *A Vision of Britain: A Personal View of Architecture*. London, 1989, p. 11.

31 Yorick Blumenfeld, Beyond the Human Scale. *Architectural Association Quarterly*, v. 6, nos. 3-4, 1974, p. 55.

Unlike his disciples, Fathy did not practice architecture as a business with decisions about office location and promotion of commissions. Fathy's clients, like every other architect's clients, all had budgets and needs, desires and constraints, specific needs and ambiguities. Most of them came to Fathy specifically because they did not like modern styles. With this in mind, it seems important throughout to consider the architect's relations with clients and the problems of developing each design from the original concept to the finished building. Architecture for Fathy is not a question of tasteful packaging, rather it is an experiential environment designed for a client in form, space, light and shade. As a consequence, along with Fathy's writings and lectures, one should give primacy to his built work, as they are the records by which he would want to be judged.

More has probably been written about the architecture of Fathy than about any other contemporary Egyptian or Arab architect. Although, Fathy's architecture occupied a curious position in the Islamic world, his reputation spread internationally after the publication of his *Architecture for the Poor* (1973). Fathy's book summed up his philosophy and critical views of twentieth-century architecture and contributed to an understanding of his contribution to architecture. *Architecture for the Poor* was extensively reviewed in the western architectural press, and has remained in print ever since. The significance and complexity of his philosophy was the subject of several monographs. In their book *Hassan Fathy* (1985), Sir James Richards, Ismail Serageldin and Darl Rastorfer, focused on an appraisal of Fathy's place in Arab-Egyptian culture as well as in the international context. Although, the book included descriptions of selected examples of Fathy's built work through drawings and photographs, analysis of the chronological development of Fathy's life and work was very limited. Two monographs by James Steele, *Hassan Fathy* (1988) and *An Architecture for People* (1997),[32] gave a more detailed description of the influences that shaped Fathy's architecture, a summary of his architectural themes and ideas, and uncovered many previously undocumented projects, providing an extensive chronology of Fathy's works. Steele's books have generally expanded knowledge of Fathy's ideas and works but they tend to examine these in isolation, and do not consider Fathy's role in the development of twentieth century architecture as a whole. Although Steele has drawn attention to Fathy's

32 These two studies are essentially the same book, the second is a revised edition of the first.

influence on the younger generation, his research was limited to Arab architects and he makes no reference to his influence on Western architects. Steele has also overlooked important details of Fathy's life and career and several buildings have been wrongly dated. A further limitation of Steele's books is the fact that many drawings and photographs of buildings are reproduced in reverse.

Two further books by Egyptian authors, *The Arab Architects: Hassan Fathy* (1987) by Abdelbaki Ibrahim and *Hassan Fathy* (1997) by Mohamed Maged Khlosi, have had a lesser impact. Both were confined to a general account of a limited number of Fathy's buildings and villages. They also lacked discussions of his life and career, philosophy and design principles and his place in twentieth century architecture. Several theses have also been written about Fathy's architecture, including two Ph.D. theses by Abdel-Mohsen Saleh Mito (1990) and Amal Ahmed Abdou (1993).[33] Mito analysed Fathy's vocabulary, but the main objective of his thesis was a comparison between Fathy and the Indian architect, Balkrishna Doshi, as two regional architects in the context of modern architecture. Like Mito, Abdou analysed the architectural vocabularies of the Islamic house as well as focusing on cataloguing Fathy's buildings and projects chronologically. Both Mito's and Abdou's research lacked discussions of Fathy's life and career, his influence on subsequent generations as well as his contribution to twentieth century architecture.

This study evolved out of the examination of these previous works, which provided a useful basis of information about the architect and a corpus of documented buildings. Its first objective is to establish a firmly documented, factual account of Fathy's life and career in order to correct the inaccurate and missing details relating to his family background of previous accounts. This made it possible to explore in greater depth Fathy's formative years, the influences which shaped his architecture and his passion for ideal forms and, more importantly, his capacity to transform lessons from history into vocabularies directed at contemporary cultural realities. This material is contained in Chapters One to Four and forms Part One of the thesis. A second, related aim is to

33 Abdel-Mohsen Saleh Mito, Hassan Fathy and Balkrishna Doshi: Two Regional Architects in the Context of Modern Architecture. Thesis (Ph.D.) - University of Georgia, 1990 and Amal Ahmed Abdou, Wohn-und Siedlungsbau anhand von Hassan Fathys Praxis und Theorie. Thesis (Doctoral) - Technische Universitat München, 1993.

provide a comprehensive catalogue of Fathy's buildings and projects. The catalogue is contained in Volume Two, along with the main body of illustrations to the thesis.

Detailed analysis of Fathy's achievement can only proceed on the basis of a firmly documented, factual foundation. This is the purpose of Part Two of the thesis. It seeks to deepen our understanding of Fathy's approach to design, his place within the larger context of twentieth-century architecture, and the changing perception of his works and philosophy of design.

Part Two consists of Chapters Five through Eight. Chapter Five examines Fathy's buildings in terms of the principles which the architect himself derived from his analysis of the Islamic-Arabic house. It demonstrates the ways in which these principles underlie every aspect of his approach to design. Fathy's designs for new communities, including his most celebrated project, New Gourna, is the subject of Chapter Six. Adopting an approach analogous to that employed for his buildings, Fathy used his analyses of traditional Arab village and urban plans as the basis for his own urban design principles.

The purpose of Chapter Seven is to place Fathy's career in an international context. It assesses the complexity of Fathy's architecture and the richness and range of its intentions. It also examines his attitudes towards modernism and the International Style as well as issues such as auto-colonialism and symbolism in architecture and critical responses to his works and philosophy. The relationship of his philosophy to recent movements, including Post-modernism, community architecture and self-help building, eco-architeture and sustainability, along with tendencies such as neo-vernacular and earth building, are also examined. The intention here is not to examine these diverse aspects of recent architecture in detail but to demonstrate the range of architectural approaches that have drawn inspiration from Fathy's example.

A final chapter traces the ways in which architects in both the Western and non-Western worlds have responded to Fathy's ideas and works. A distinction is also drawn between those architects who have borrowed from his work in an eclectic manner and those who have made considered responses to the principles which underlie his designs.

The appendices provide additional factual information on Fathy's life and career while the bibliography provides a comprehensive list of all Fathy's known writings, both published and unpublished. The bibliography also contains a comprehensive list of publications on Fathy in Arabic, English and other European languages.

The methodological framework of this thesis involved a combination of extensive and intensive field work along with archival and library research. The field work, which was conducted in Egypt between November 1999 and February 2000, included visits to the sites and photographing many of Fathy's buildings and villages. During this period I was able to meet and interview some of Fathy's relatives, close friends and clients, who are now elderly people. These included, Abdel-Hamid Ezzat, Fathy's nephew, Souad Hamdi, Fathy's niece, the artist Hamid Said, Fathy's close friend and one of his clients in the 1940s, Tusun Abu-Gabal, one of his clients who offered photographs of his house at the time of its completion in the 1950s and Fathy's close friend, Dr Nawal Hassan. The field work also included in-depth tape-recorded interviews with other clients, architectural professionals and scholars and those who valued Fathy's work and philosophy. All these people offered valuable insights into the realities of the architect's life as well as confirming the existence of a number of previously unverified buildings.

While Fathy's surviving buildings are the principal documents which provide the truest evidence of his approach, the archival and library research also provided valuable records that aided the interpretation of the buildings studied in the field. The extensive collection of Fathy's architectural drawings and writings, which cover almost every stage of his career, is now in the library of the American University in Cairo (AUC). Although Fathy's collection is still undergoing systematic cataloguing, I was allowed access to his archive. Fathy's collection is of various sorts, including drawings, careful studies of traditional architectural elements, and lectures, papers and reports which refer to his philosophy and ideas. The archive also included Fathy's own library which is rich in books covering a range of disciplines, including architecture, art, music, history, literature, economics and politics, offering an insight into Fathy's architectural, social and political views. Examination of these archival materials helped illuminate Fathy's interest as an architect, the range of types of projects and the development of his architectural style. It also defined the specific architectural qualities which highlighted

the broad lines of his ideals and philosophy. A comprehensive search of periodical literature, including Arabic journals as well as western architectural magazines, has also provided unexpected insights into Fathy's life and career. Publications aimed at a more popular readership, have provided valuable documentation of changing perceptive of Fathy's architecture.

Access to Fathy's drawings in the AUC was restricted because they were undergoing thorough conservation, but I was subsequently able to consult them on the Archnet website, (www.archnet.org) during 2001. In addition, the previous literature on Fathy provided plans, elevations and photographs for a large number of buildings which were of great help in analysing his work. Wherever possible my aim has been to discuss in-depth the buildings and villages I visited in Egypt, including Talkha Primary School (1928), Hamid Said house (1942), Hamdi Seif Al-Nasr house (1945), Hassanein Mausoleum (1946), Tusun Abu-Gabel house (1947), Stopplaere house (1952), Luxor Cultural Centre (1970), Fathy's own house (1971), Al-Wehda Mosque (1974), Mit Rehan house (1981), Andrioli house (1984), Fathy's house in medieval Cairo, where he lived until he died in 1989 and villages including the New Gourna Village (1945), Lu'Luat al-Sahara village (1950) and the Journalists' Village (1989).[34]

Many of the characteristics which helped to define the works of Fathy have now become the commonplaces of contemporary Arab architecture. The adoption of traditional and local materials is now widespread, as is the use of historical references. The traditional forms of Fathy's buildings have also become familiar through overuse at the hands of architects who have adopted the superficial qualities of his approach without fully appreciating the functional relationships these forms were intended to both serve and express. Fathy's buildings are still standing in Egypt and elsewhere, but the threat to his buildings from neglect and deterioration is very serious. However, the more systematic study is undertaken the better Fathy's buildings and ideals will be understood, appreciated and preserved.

34 Buildings and villages visited by the author are marked by * in the catalogue in volume two.

CHAPTER ONE

EARLY LIFE AND CAREER
(1928 - 1945)

Hassan Fathy was born in Alexandria, Egypt on 23 March 1900 into a well-to-do family. He was the fifth of seven children, having three brothers and three sisters. His father, Ahmed Fathy, was born in Alexandria to a respectable family whose ancestors had come from Morocco (ill. 1). He was a senior police officer in Alexandria but because his position required him to arrest poor people who had breached the law simply to keep themselves alive, he abandoned his job. Ahmed Fathy worked as a French language teacher and at the same time studied law to become a judge in Alexandria Public Court. When Fathy was eight years old, his father moved the family to live in Helwan, a suburb near Cairo, where he lived until he died on 5 February 1933.[1]

Fathy's mother, Del Bassand, was a Caucasian who drifted from Turkey with her family to settle in Alexandria and married Ahmed Fathy (ill. 2). According to Fathy's niece, his mother gave birth to twelve children; five of whom died in early childhood and nothing is known about them. Fathy's mother had learned Arabic and the Koran and was skilled in healing her children with natural herbs. She died six years before her husband on 29 December 1927. All Fathy's brothers were talented. His elder brother, Mohammed, who studied law like his father, become a professor in the Faculty of Law, Cairo University. He founded the subject of criminal psychology in Egypt's universities and was the author of several important books. He was also talented in painting, photography and traditional Arabic music. He played an important role in founding the first Conservatoire for the study of Arabic music in the Arab world during the time of King Fuad I.[2]

His brother, Ali, was an engineer and dam expert, who held conservative and influential

1 Author's interview with Souad Hamdi, Fathy's niece, January 2000. Souad mentioned that all Fathy's brother and sisters have now died.
2 Ibid.

views on the side-effects of building the High Dam at Aswan in the time of President Gamal Abd El-Naser. He founded the Faculty of Engineering in the University of Alexandria and become its first dean. He was also talented in physics, astrology, painting and music. Fathy's three sisters were Adila, Zeibeda and Zeinab. His youngest sister, Zeinab, was fond of swimming and diving and she received many awards in these sports. She also introduced Fathy to her close friend, Aziza Hanem Hassanein, whom Fathy married around 1945.[3]

Fathy's wife was the sister of Ahmed Hassanein, who was the chief secretary and adviser of King Farouk. Hassanein was a politician whose influence upon the course of affairs was recognisable in the war years between 1940 and 1945. He was also eager to have decisive influence over the Egyptian government.[4] Family connections thus gave Fathy close links to the elite of the country, although his personal qualities also won him admittance into the ranks of that high society in Egypt (ill. 3). Very little is known of Fathy's marriage, which was dissolved after a few years without any children. Fathy believed that his marriage was a "company that bankrupted". He never married again because he was very busy travelling and visiting many different countries as well as struggling to establish acceptance of his architectural ideas.[5]

Fathy spent all his boyhood in Cairo, where he completed all his education. The visual character of his primary and high schools was an important influence on him. Fathy attended his primary school, Mohammed Aly School, from 1910 to 1914.[6] It was built by the Ministry of Public Works as a row of identical classrooms with a corridor in front of them. For Fathy this was "ugly, certainly characterless and artistically neutral".[7] One building which may well have excited his youthful imagination was his high school, the 'Khediveya School', which he attended from 1914 to 1918 (ill. 4).[8] It was completely different, and he retained "the most vivid and delightful memories of unexpected corners, odd-shaped open spaces, halls and classrooms of all shapes and sizes, and

3 Author's interview with Abd El-Hamid Ezzat, Fathy's nephew, January 2000.
4 Vatikiotis, 1980, p. 293.
5 Author's interview with Fathy's nephew. January 2000.
6 Ms. List of schools attended and qualifications achieved, FAAUC.
7 Fathy, 1973, pp. 84-85.
8 Ms. List of schools attended and qualifications achieved, FAAUC.

lovely gardens".[9] It still survives and has a surprisingly modern look due to the lack of decoration which gives it a timeless quality. Although the elevation has no great originality, its main entrance has a great deal of elegance with its two triple-height fluted columns, which support a thin cornice. The building was designed as a palace, not a school, and this might be the reason that its domestic architecture quickened Fathy's imagination and sensibility.

A positive and creative environment formed Fathy's early thinking. It could be that his father's sympathy for the poor and his unwillingness to make life more difficult for them was transmitted to him. Fathy's mother also considered the arts as something important in bringing up her children and this was reflected in Fathy's love for music and art. In addition, his talented brothers and sisters were another important factor in his upbringing and that was also mirrored in his awareness of what was going on around him. Nevertheless, the most important influence that helped to shape Fathy's identity was the countryside.

Fathy remembered the common question he was asked when he was young; "if you were given a million pounds, what would you do with them?" Fathy's wish was, "to build a village where the fellaheen [villagers] would follow the way of life that I would like them to". This wish had deep roots, going back to his childhood. Although his father possessed many estates in the country, Fathy knew little about the countryside where the villagers lived. "Until my twenty-seventh year I never set foot on any of our country property". He only saw these villages from the window of the train when he went from Cairo to Alexandria for the summer holiday. Fathy's experience of the country was supplemented by two contrasting pictures, which he received from his parents.[10]

Fathy's father believed that the country was an unpleasant and unhealthy place and consequently forbade his children to go there. On the other hand, his mother, who spent part of her childhood in the country and preserved pleasant memories, told him delightful stories about the farm and how people produced everything required to meet

9 Fathy, 1973, pp. 84-85.
10 Ibid., p. 1.

their needs. She also told him about her continuous desire to go back to live in the country. "I seemed to inherit my mother's unfulfilled longing to go back to the country". These two contradictory pictures fused in Fathy's imagination to create an ambivalent picture of the country as a desirable place but one infected by diseases. Therefore, he decided to do something to improve the countryside of Egypt. Fathy believed that "the people who are to transform the countryside will not to be able to do it by large directives issued from office desks in Cairo". Fathy argued that it was necessary to love the villager and to devote one's life to the improvement and development of rural life.[11]

The period between 1890 and 1914, covering the early phase of Fathy's early life, was important in the history of modern Egypt. Khedive Abbas Hilmi II, who ruled Egypt between 1892 and 1914, was one of the early political figures who had shown an Egyptian nationalistic attitude, involvement in Arab nationalism and a great desire to get rid of the British control. However, the British power, which governed all Egypt's affairs, witnessed a direct confrontation from the leading publicist of the time who took up the articulation of local reaction to the situation.[12] Chief among the contemporary political leaders was Mustafa Kamel, founder of the National Party and publisher and editor of *Al-Liwa* (The Standard). Kamel's main objective was the liberation of Egypt from alien rule and the expulsion of Britain from Egypt, even if this required the use of force.[13] Fathy joined his secondary school at the outbreak of the First World War in August 1914. At this time, Egypt enjoyed a stable government, a solvent economy and cultural and social developments.[14] In this year also Britain changed the legal status of Egypt by detaching it permanently from Turkey. While Khedive Abbas II was in Istanbul, Britain took advantage of his absence and deposed him. They appointed his uncle, Husayn Kamil, to succeed him with a new title of Sultan instead of Khedive and without permission from the Ottoman Sultan. By the end of the war, on the one hand, both rural and urban masses were suffering hardship as a result of shortages of essential commodities. On the other hand, local native industries began to develop remarkably to supply goods instead of importing them from Europe.[15]

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11 Ibid., pp. 1-2.
12 Gershoni & Jankowski, 1986, p. 18.
13 Vatikiotis, 1980, pp. 202-204.
14 Ibid., p. 247.
15 Ibid., pp. 247-253.

On 9 October 1917, the Sultan of Egypt, Husayn, died and his brother, 'King Fuad I' (1917-1937) acceded to the throne.[16] When Fathy left his secondary school in 1918, Egypt was beginning a phase of enormous change economically, socially and politically. The First World War had brought the villagers into close contact with the urban dwellers. This did not mean that the peasants were introduced to modernity, but the nationalist leaders descended among the peasants, who formed the majority of the Egyptian population, to seek political support. Poverty and sickness were the two essential factors that prevented the villagers from contributing positively to the economic development of the country. Their poverty was the result of an unstable agricultural-economic structure, while their sickness resulted from bilharzia and ankylostoma which came with the modern irrigation systems introduced by Mohammed Ali in the nineteenth century.[17]

Fathy's love for the country and the peasant life led him to apply to the School of Agriculture in Cairo, believing that he would be able to serve the villagers, but he failed its entry examination. In 1919 Fathy decided to study architecture in the High School of Engineering, Architectural Section, University of King Fuad I, now University of Cairo. His training followed the curriculum of the Beaux-Art in France and was influenced by the principles of classical architecture.[18]

> We never studied classical Egyptian Islamic architecture at school. Of course we studied it in the History of Architecture course, as exotic architecture in four or five pages of a history book.[19]

In this year Saad Zaghlul (1860-1927), previously Minister of Education and of Justice, and then leader of the independence movement, led a rebellion against the British occupation and the palace. Zaghlul was widely known as "the father of the Egyptian" because of his role in encouraging Egyptian nationalism. University students led the rioting in Cairo and disorders broke out throughout the country. Fathy may have shared in these nationalistic events, which certainly had an influence on his thinking. Zaghlul also founded the Wafd, the best organised political party in the history of modern Egypt,

16 Ibid., p. 254.
17 Ibid., pp. 7-8.
18 Fathy, 1973, p. 2.
19 Attilio Petruccioli, Hassan Fathy: Inseguendo il Poeta dei Mattoni Crudi (Tracking Down the Poet of Raw Bricks). *Spazio e Societa*, no.17, March 1982, p. 57.

which struggled for Egypt's independence and the preservation of its national identity.[20] The main result of the Egyptian Revolution of 1919 was the achievement of official if not complete Egyptian independence. In February 1922, Great Britain renounced its protectorate over Egypt. This was followed by the proclamation of Egyptian independence on 15 March 1922.[21]

When Fathy graduated from the university in 1926, a cause célèbre broke upon the Egyptian political scene with the publication of *Fi Al-shir Al-jahili* (On Pre-Islamic Poetry), by Taha Husayn (1889-1976). He was a Professor of Arabic Literature in the State University and had also been trained in France. In this book Husayn defied the basic Islamic dogma and traditional beliefs in two ways. First, he questioned the scholar's traditional-religious interpretation of the Koran and Prophetic tradition on the basis of pre-Islamic poetry. Second, he suggested the introduction of rational Cartesian and other philosophical methods into literary criticism. As a result of the opposition of conservative scholars, Husayn was eventually dismissed from the university in 1931.[22] This incident reflects the fundamental differences in thinking between Azhar-trained and European-educated Egyptians but also exemplified the struggle between traditional patterns of thought and imported ideas.

The critics of tradition like Taha Husayn and others differed from their contemporaries because they were influenced by the new scientific theories of the 19th and 20th centuries such as Darwinism.[23] Inevitably, the traditional society came under attack in other fields such as urban planning and architecture. Another event which might have influenced Fathy at the time was the foundation of the Young Men's Muslim Association (YMMA) in 1927. It was a social, athletic and cultural counterpart of the Young Men's Christian Association (YMCA). It also published its own *Journal of Muslim Youth* in 1929 to highlight the indifference of a rising, Europeanised, urban generation.[24] There is no evidence of Fathy's affiliation to the YMMA, but there is no doubt that he was

20 Vatikiotis, 1980, pp. 255-256.
21 Gershoni & Jankowski, 1986, p. 54.
22 Vatikiotis, 1980, p. 305
23 Ibid., p. 306.
24 Ibid., pp. 198-199.

following these nationalistic events, which had a remarkable impact on Egypt's youth at the time.

Abdelbaki Ibrahim, one of the most articulate advocates of Fathy's architecture, previously head of the Architectural Department, Faculty of Engineering, Ain Shams University and now publisher of the most prestigious architectural magazine in Egypt, *Alam Al Bena* (World of Building), argues that during the early ages of Islam, the sultan gave the responsibility of building mosques and palaces to foreign architects. These architects merged into the local environment and interacted with the local labourers. However, although Egyptian Islamic architecture was the product of foreign thoughts, it was built by Egyptian labourers and expressed local and regional features. When Muhammad Ali ruled Egypt (1805-1848), on the contrary, its architecture was designed by foreign architects and exhibited alien features. This phenomenon has increased from the time of Khedive Ismail (1863-1879) right up to the present day. Egyptian architecture came under either the direct influence of the work of foreign architects working in Egypt, or the indirect impact of Western architectural publications and the influence of Egyptian scholars trained in Europe. This resulted in the loss of a sense of identity on the part of Egyptian architects and in the nation's architecture.[25]

From 1910 onward Egyptian architects began to have a tangible role among European architects working in Egypt at the time. Ali Labib Gabre, one of Fathy's contemporaries, graduated from the Liverpool School of Architecture in 1926. Like Fathy, Gabre was influenced by European architectural theories and principles, which he applied in his public and residential work. Another Egyptian architect, whose influence was also significant, was Dr Saiyed Karaem, who rebelled against traditional architecture. Karaem finished his architectural training in Zurich, Switzerland, and was influenced by many of the contemporary European architectural styles.

In the 1940s, when Fathy began his search for Egypt's architectural identity, Karaem published and edited the *Magalet Al-Emara* (The Architectural Magazine) in order to promote his modern approach and ideas. The philosophy of the magazine was to

25 Abdelbaki Ibrahim, *The Historical Perspective of Architecture in the Arab World*. Cairo, 1987, p. 44. (in Arabic).

introduce modern architectural theories and ideas of the Western intellect to Egypt, such as the 'Organic Architecture' of Frank Lloyd Wright, the 'Rationalism' of Mies van der Rohe, the 'Expressionism' of Erich Mendelsohn and the 'Functionalism' of Le Corbusier. Although the magazine was significant for the development of 20th century Egyptian architecture, it lasted for only five years. Like Fathy, there were other architects who were concerned about the issue of Egypt's architectural identity. Among them were, Mahmoud Pasha Fahmy followed by his son, Mustafa Pasha Fahmy, who was the architect of the king. Fahmy made an attempt to outline the features of a new architectural style which he called 'Islamic Baroque'. This style was expressed in public buildings and palaces, and exhibited features of traditional Arabic architecture. Among these buildings are the main building of Gezeirah Fair Land (1913), and Dar Al-Hekma building. In the same period, many other Egyptian architects, including Mahmoud Riyad, abu-Baker Khayrat and his brother Ali Khyrat, studied Islamic architecture and supervised the buildings of numerous mosques.[26]

From 1926 to 1930, Fathy worked at the Department of Municipal Affairs (DMA) in Cairo.[27] Little is known about these four years and it would appear that Fathy's main experience was gained in the more practical aspects of architecture such as construction, writing specifications, supervision and administration of the building contracts. There can be no doubt of the immense influence exerted on Fathy by buildings in European styles, which could be seen in and around Cairo. At this early stage in his career it is likely that he rejected traditional Egyptian architecture in favour of Western classical and modern ideals. Fathy does not appear to have produced many buildings during this period, and we know for certain of only one.

In 1928 he got his first job in Talkha (a small town on the River Nile in the north of the Delta, about 150 kilometres from Cairo) to design and supervise the Talkha Primary School, now Ahmed Hassan Al-Zaiyat Secondary School (ill. 5).[28] Fathy explained that when he was asked to design a school in a village, he thought of following either the local rural style or the Egyptian. But the authority of the DMA wanted it to be designed

26 Ibid., pp. 42-43.
27 Ms. List of Fathy's biography, FAAUC. (in Arabic).
28 Fathy, 1973, p. 3.

in the classical style. At first, he refused because he felt that designing and erecting a building was a big responsibility. However, he decided to solve the problem with an architecture vaguely inspired by the Pharonic style.[29] "I chose the Doric style because... the Egyptian architecture has the Doric style".[30] There was no policy of designing schools in the classical style, but this might reflect the immense influence of Western ideas on the development of Egyptian architecture at the time. In the period between 1870 and 1930, Egypt was exposed to a specific architectural movement. It was characterised by a mix of Arabic patterns and imported European ones, specifically from Italy, France and Austria. The state of conflict between Arabic and western patterns was clear in construction such as Bank Misr (1927), by a French architect and the Islamic Museum. These buildings exhibited superficial Arabic decorative elements such as balconies and *māshrābīyyāhs* (wooden lattice work). This approach was opposed at the time, because the outer appearance of the buildings did not express the essence of the design.[31]

Unfortunately, Fathy's surviving drawings for the Talkha School are incomplete and patchy. As a result, previous discussions of Fathy's early career have remained tentative, with no clear explanation of the extent to which he was able to apply classical principles to his designs.[32] Nothing was known about this school until Fathy's nephew, Abd El-Hamid Ezzat, confirmed that it still exists and is in a good condition. Fathy probably gained the inspiration for this school from the design of his own high school. A visit to the Talkha School in 2000 revealed that it is a simple building in the classical style and of little distinction but it would have allowed Fathy to examine the application of revived classical principles at first hand. The building is basically a symmetrical, two-storey structure on a basement, which forms a podium for the building. It has a

29 Petruccioli, *Spazio e Societa*, no. 17, March 1982, p. 57.
30 Ibid., p. 49.
31 Ibrahim, Cairo, 1987, p. 41. (in Arabic).
32 The incomplete drawings of the Talkha School as well as the difficulty of verifying the actual building led other researchers to be confused and combine drawings of other buildings as illustration to the school. For example, in *The Hassan Fathy Collection: A Catalogue of Visual Documents at The Aga Khan Award for Architecture*. Bern, 1989, p. 11, James Steele included an elevation which does not relate to the actual school building. Likewise, Amal Ahmed Abdou in her Ph.D. Wohn-und Siedlungsbau anhand von Hassan Fathys Praxis und Theorie. Thesis (Doctoral) - Technische Universitat München, 1993, p. 8, based her account and the illustration of the school on those of Steele's catalogue. For more information of the school drawings, see Fathy's archive in the Archnet website www. Archnet.org

central portico projecting slightly in front of the facade supported by two Doric columns (ill. 6). The first and second floors have colonnaded corridors, which allow access to all classrooms.[33]

The school is characterised by an elegant simplicity gained by the refined sense of scale and proportions coupled with the controlled use of decoration. Fathy appears to be striving to express the building's function and not to be merely juggling with forms. The main facade included classical details such as Doric columns, fretwork and pediments (ill. 7). These features are also continued round the side elevations and helped to unify the building's facades into a satisfying three-dimensional composition. Although not without interest Talkha School clearly does not mark a significant development in Fathy's career; it is, nevertheless, an accomplished piece of architecture that relies strongly on the compositional ideas basic to the Beaux-Arts outlook, although the architectural elements used in the facades have little to do with the grand classical manner.

The progression from the earliest documented projects of Fathy, completed between 1928 and his Mansoura Exhibition in 1937, shows a remarkable transition in ideas from his classical architectural training to a traditional approach inspired by vernacular architecture.[34] It is hard to believe that these first buildings of the late 1920s and the 1930s, are the work of Hassan Fathy. He started his career by designing buildings using the classical idiom to demonstrate his familiarity with Western architecture. From the remaining sketches and designs, one can read the obvious impact of Western architecture on his thinking.

From 1930 to 1946 Fathy was appointed to teach at the Faculty of Fine Arts in Cairo.[35] In 1930, he was granted a scholarship to further his study in Paris.[36] Nothing is known about the details of where and what Fathy studied in France. But there is no doubt that he was exposed to what was happening in French architecture, especially the works of

33 Talkha School was photographed and documented by the author, 2000.
34 James Steele, *An Architecture for People: the Complete Works of Hassan Fathy*. London, 1997, p. 23.
35 Ms. List of Fathy's biography, FAAUC. (in Arabic).
36 Those Have Won the Country's Honorary Award. *Al-Ahram*, 1 June 1959, p. 8. (in Arabic).

Le Corbusier, who was one of the dominant international figures of modern architecture. It is likely that Fathy studied Le Corbusier's modern architectural system, as well as visited his completed works including, the Maison Cook (Boulogne-sur-Seine, 1926), the Villa Stein (Garches, 1927) and the Villa Savoye (Poissy, 1928-1931). Fathy's own library included some notes about Le Corbusier, which refer to his knowledge of Le Corbusier's 'five points of architecture'.[37] A number of buildings which Fathy built in this period mirror his tendency to favour the predominating architectural trends at the time. Hosni Omar villa (1930) was designed by Fathy in conjunction with Ahmed Omar who was one of the client's relatives. This was the first time that Fathy collaborated with someone else in his designs. In this building Fathy efficiently employed modern details such as flat roofs, plain wall surfaces and industrial materials (ill. 8).[38]

La Giardiniera Kiosk in Bulaq, a suburb in Cairo was another building constructed in 1930. It was intended as an addition to an existing house.[39] The facade exhibited De Stijl features such as straight lines and immaculately finished surfaces (ill. 9). The De Stijl movement was founded in 1917 by a group of artists and architects including Theo van Doesburg, Piet Mondrian and Gerrit Rietveld and lasted for fourteen years. Its formal language was taken over directly from Neo-plasticism.[40] Ironically, Fathy followed the principles of De Stijl, which opposed tradition, a tendency that he spent most of his later life advocating. Perhaps the reason for the use of this style was the need in the early years of practice to conform with current fashion.

In the same year Fathy was commissioned by Sada Al-Bariya to design a house in the Fumm Al-Khalig district in Cairo. This building contained living quarters for the owner and two additional rental units. While the building still shows the influence of modernism, Fathy for the first time used an internal court to provide privacy. This court provides the first evidence of the spatial organisation that was to become one of the

37 Le Corbusier's five principles are the free plan, the free facade, the pilotis, the roof garden and the strip window.
38 Steele, 1997, p. 188.
39 Ibid.
40 For a detailed discussion of De Stijl architecture, see Carl Blotkamp, *De Stijl: the Formative Years, 1917-1922*. London, 1986.

characteristics of Fathy's later work.[41] Two years later, Fathy had the opportunity to design his first commercial building. In 1932 the Qudsi brothers approached Fathy to design the now-demolished Bosphore Casino to be located on the corner of the old Queen Nazli Boulevard at Bab Al-Hadid, in Cairo.[42] Fathy's design showed his confidence in handling elements of the contemporary European Art Deco Style such as the building's boxy rectilinear shape, geometric elements and circular windows with ornamental metalwork (ill. 10). Art Deco is a French phenomenon which borrowed its name from the 'Exposition Internationale des arts décoratifs et industriels modernes' held in Paris in 1925. It is a synthetic form of stylisation mediating between the avant garde and tradition.[43] Whatever the reason for the choice of style, there are sufficient ideas in the Bosphore Casino as well as La Giardiniera Kiosk to suggest that Fathy had broken from the influence of the classic idiom.

The following year, in 1933, Mustafa-Bey El-Kachkachi wanted to expand his newspaper operation. He asked Fathy to design a six-story residential building in Al-Dakhliya Street in Cairo. Only the ground floor of the building was intended to be the location of the journal *Al-Sabah.*[44] This building is of no particular architectural merit, but like the Omar and Al-Bariya villas it shows the influence of diverse European influences such as the Bauhaus and Art Deco. Despite the buildings executed by Fathy prior to the 1937 incorporating a number of classical elements along with distinctively modern elements, the evidence suggests that Fathy was neither moving steadily towards modernism nor returning to classicism.

Fathy's work in a classical and modern manner did not reveal an effective reinterpretation of a particular prototype. Rather we are confronted by a jumble of styles including classical and modern features. What Fathy gained from using the classical style was his efficient use of simple geometrical forms in the elevation, which he also employed in subsequent buildings in the same period. In all this one can see that Fathy

41 Steele, 1997, p. 188.
42 James Steele, *The Hassan Fathy Collection: A Catalogue of Visual Documents at The Aga Khan Award for Architecture*. Bern, 1989, p. 10. The Bosphore Casino no longer exists; its site was visited by the author, but it is now occupied by another building.
43 For a detailed discussion of Art Deco architecture, see Patricia Bayer, *Art Deco Architecture*. New York, 1992.
44 Steele, 1989, p. 10.

was preoccupied with the idea of mathematical harmony and the idea that certain fundamental ratios can produce beauty.

The years 1933 and 1934 witnessed similar residential and commercial work characterised by the use of flat roofs and industrial materials. There are no recorded buildings or designs by Fathy between 1934 and 1937. Just prior to the Mansoura Exhibition Fathy completed a series of designs which were midway between classical architecture and Islamic architecture. Perhaps the most representative work of this phase, which marked a turning point in Fathy's development, was his design for the Mrs Isabel Garvice house (1937) in Cairo (ill. 11). Fathy incorporated elements derived from medieval Cairo houses, such as a central courtyard, *māshrābīyyāh* (wooden latticework window) and, for the first time, separation of public and private spaces. The application of classical and modern vocabulary that characterised his early work is also missing in a design for Taher Al-Emari Bek (1937) (ill. 12). This house (also demolished) was intended to be located in Sidmant Al-Gabal in the Fayum, a city near Cairo.[45] The drawings show growing evidence of the transition in Fathy's approach and philosophy towards a more traditional architecture.

Fathy was increasingly suspicious of the applicability of the classical system of the Beaux-Arts approach and he had also begun to question the validity of modern Western forms. Instead of developing his western training, he turned his mind to the design of buildings which explored traditional ideals. The 1930s seems to have been a crucial period in Fathy's development. At a time when modern architecture and the International Style began to grow and progress, it was difficult to establish a more traditional approach. For more than a decade the young architect was confronted with a series of dilemmas. Should he believe in the principles of his Beaux-Arts education? Should he follow the modern architectural movement which required a constant quest for innovation or should he abandon all these foreign styles and turn to his own tradition? The same architect who learned so much about classicism, regarded the peasant house as a supreme architectural creation. Therefore, he decided to go back to

45 Demolition of Taher Al-Emari house was verified by the author, 2000.

his country's local architecture in an attempt to formulate an appropriate architectural language.

Fathy's attitudes in the 1930s are reminiscent of those of Marc-Antoine Laugier in 1753 who called for a return to a primitive classical clarity in which all unnecessary ornament would be eliminated by making the orders functional and not decorative. Laugier was appreciating the past and intended to return to the origins believing that one might achieve the most authentic results by returning to primitive beginnings.[46] William Curtis argues that occasionally a single architect or artist emerges and recognises the fundamental assumption of a period. He also sees that these individuals are always characterised by a unique consistency and integrity as well as the ability of both a mastery of means and a rare competency in giving an idealistic world-view a deep expression. Curtis also explains that their work embodies solutions to problems that are appropriate far beyond their resources and circumstances. He believes that these artists

> crystallise the preoccupations of a period, and influence others distant in space and time. Whether they intend it or not, artists with such charisma become the founders of new traditions.[47]

Among those who have this imaginative dimension were Le Curbusier and Frank Lloyd Wright, who emerged during the formation of modern architecture. The 1930s was also a decade in which these great architects succeeded in transforming their earlier themes and applied them in works that were microcosms of their view of things.[48] In his own way, Fathy was also an architect who founded a new tradition, although in his case he did so by reverting to ancient principles of design.

Fathy recalled the time when he was building his first school in Talkha. The miserable appearance of the people had a remarkable effect on him.

> I could think of nothing but the hopeless resignation of these peasants to their condition, their cramped and stunted view of life, their abject acceptance of the whole horrible situation in which they were forced to put up with a lifetime's scrabbling for money amid the wretched buildings of Talkha. The revelation of their apathy seized me by the throat; my own helplessness before such a spectacle tormented me. Surely something could be done.[49]

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46 David Watkin, *A History of Western Architecture*. London, 1986, p. 333.
47 William J. R. Curtis, *Modern Architecture Since 1900*. London, 1996, p. 113.
48 Ibid., p. 329.
49 Fathy, 1973, p. 3.

Fathy had been very aware that those peasants were suffering to such a degree that they could not initiate any change for the better. He believed that neither capitalists nor the state were eager to find a solution to house the poor peasants, which "return no rent to the capitalists and too little glory to the politicians". Fathy began his rebellion against the peasant's wretched houses by encouraging his parents to rebuild one of their farms near Talkha and they did. He also repaired and remodelled a two-room rest house at the farm, so that he could stay and supervise his farm and the peasants. Fathy's stay in the farm was a milestone in the development of his ideas and aspirations to improve the condition of the countryside. Fathy believed that "in every hovel and tumbledown hut in Egypt, was the answer to my problem".[50]

Fathy argued that the peasant's houses might be inconvenient, dark and dirty, "but this was no fault of the mud brick... why not, indeed, make the peasant's own houses better? Why should there be any difference between a peasant's house and a landowner's?" Fathy believed that if both are built of mud brick, but designed well, both could offer beauty and comfort to their owners. As a result, he began to design country houses in mud brick and produced a wonderful repertoire of drawings, which were exhibited in Mansoura, a city on the River Nile opposite Talkha, in 1937 and later in Cairo (ill. 13).[51] Nothing is known about the exact venue of the exhibition either in Mansoura or in Cairo. There is also no information found in Fathy's archive concerning his exhibition and it does not appear to have been discussed in any publication at the time.[52] The drawings were accurate and strongly influenced by Egyptian country houses with their intricate details. They also revealed Fathy's wide imaginative response to the surrounding landscape. Fathy's drawings included a group of houses which was strikingly free from any obvious prototype, though in terms of style they were certainly old-fashioned and looked closer to the peasant house than its modern counterpart. On the architectural front, the Mansoura exhibition was perhaps the most elaborate exercise of this period. It showed the success of using traditional forms and materials, as well as demonstrated the standard Fathy had reached by this time.

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50 Ibid., p. 4.
51 Ibid., p. 5.
52 Further research is needed to shed light on the nature of the exhibition.

Fathy's interest in traditional old buildings was paralleled by an equal enthusiasm for the landscape. This much was explicit in his paintings in the Mansoura exhibition. The same sort of enthusiasm for this type of landscape was shown in drawings for New Gourna village (1945-1948). An architect's vocabulary takes time to absorb influences and mature. When we examine Fathy's paintings in the Mansoura Exhibition, we find that it was not a totally resolved pattern of houses because Fathy's sources were still not absorbed sufficiently for him to be able to speak of a coherent personal style. But the exhibition was a pivotal work and played an important role in the formation of his new approach in which a guiding concept was first revealed.

Fathy's gouaches in the Mansoura exhibition displayed detached houses standing on open land in the countryside to crystallise a key spatial idea. These houses consisted of masses of one storey with flat roofs and a dome on one side. It was to take Fathy some years to find a way of expressing such spatial ideas in a way that allowed some elements to float. Through this exhibition Fathy succeeded in creating an image of the Egyptian landscape that undoubtedly influenced the public's way of seeing it. He developed a singular style, utilising recurrent components of the Egyptian vernacular. These included architectural typology such as domes, vaults, courtyards, shapes of openings and decorative details. In addition, traditional materials and building methods are also important elements, which evoke the picturesqueness of the vernacular and achieve a symbolic identity. These elements reflected the nostalgia of people for the countryside and an appreciation of the old peasant way of life.

The Mansoura Exhibition had an enormous impact on some people who were attracted to the beautiful traditional forms. After delivering a lecture to demonstrate his conception of the country house, Fathy received some commissions. Ironically, most of his clients were rich people who chose these houses mostly because they were beautiful. Unexpectedly these houses were not cheaper than houses built of other materials, because of the expensive timber required for the houses' roofs.[53] Many of the houses Fathy designed between 1938 and 1941 were ingenious fusions of the Egyptian vernacular and European forms. He designed a series of houses and commercial buildings in which he pulled together many of the themes that he developed in the

53 Fathy, 1973, p. 5.

Mansoura Exhibition. His work in this period was characterised by a struggle between western values and his country's vernacular architecture.

One year after the exhibition, Fathy built a house for Mrs Al-Hariri (1938) in Giza near Cairo. This house shows that Fathy was trying to find his way at this crucial point in his career and that he was still interested in Western forms. The remaining elevation of the house exhibited the vocabulary of the International Style in the form of a cylindrical glass stair enclosure (ill. 14). Many other references, however, such as Fathy's use of an inner garden which is protected from the street by an arched screen wall, "hint at things to come".[54] In the same year Fathy built a house for his brother, Mohammed, in Kom Al-Akhdar in Egypt. The plan of this house consisted of an entry foyer and central stairwell which lead to formal living and dining rooms. The elevation indicated Fathy's use of Mediterranean themes such as roofs capped with red-tiles (ill. 15).

In 1938 Fathy also built a house for the famous Egyptian artist, Hayat Mohammed, in Dokki, Cairo. The drawings of this project were signed by Ahmed Omar, who collaborated with Fathy in the design of Husni Omar house in 1930. There is no evidence of the nature of the relationship between the two architects. Nevertheless, Fathy again reverted to the International Style and this may explain the continuing influence of Omar because of the similarity in style between these two houses.[55] Hayat house was followed by another design in the same year for Zaynab Hanem Hishmat in the same suburb in Cairo. In this case, Fathy continued to use the same flat roofs and plain surface but began to enliven them with new elements derived from the Islamic house, such as the projecting *māshrābīyyāh* window, arched doors and windows, fine carved wooden balcony railings and claustra-work masonry (ill. 16). These houses of 1938 showed the extent to which Fathy had ornamented the exterior of what was still an International Style building with details from a vernacular vocabulary. The plans of these houses are also, in fact, parallel to those of the most avant-garde work being done in the West at the same time.[56]

54 Steele, 1997, p. 189.
55 Ibid., p. 189.
56 Steele, 1989, p. 10.

Until 1941 Fathy's designs for several other houses, public buildings, hospitals and farms also revealed the same transitional ideas as his residential work. Of these, two houses designed for the Abd Al-Razik family in Upper Egypt are particularly notable. The first of these was for Isma'il Abd Al-Razik (1941) in Abu-Girg and the other was for Hassan Abd Al-Razik (1943) in Bani Mazar. The recorded studies and drawings of Abd Al-Razik house of 1941 reveal that the design has been refined through three successive stages. In all these three solutions Fathy was keen to achieve the separation between the formal reception and the family area, which was to become an important element in all his subsequent designs. One of the best gouaches that the architect ever completed was for this house (ill. 17). It represents the third of these solutions, which could be seen as a pivotal point in Fathy's philosophical development. The gouache also exhibited all Fathy's architectural vocabulary as well as a well-established set of values which fully expressed his principles.[57]

Investigations into the existence of these two houses in 2000 revealed that Al-Razik family has five houses; two in Bani-Mazar and three in Abu-Girg. There are some grounds for thinking that the two houses designed by Fathy for Al-Razik family were built. All these houses seem to have taken shape at the same time, but their character is completely different from that of Fathy's design. For example the existing building in Bani-Mazar shows a two-floor house built in the classical manner, while Fathy's drawings exhibited elements of both the Egyptian vernacular and Islamic architecture. However, there is some doubt as to whether this work was carried out by Fathy. Whether the Al-Razik family built their houses by modifying Fathy's drawings, or Fathy had made a completely different design, the attribution of these two houses to Fathy remains tentative.[58]

By this time the Second World War had broken out in Europe and soon began to affect the Middle East and Egypt. Consequently, social and economic changes occurred and undermined certain popular traditional and religious ideas in Egypt. Food shortages lead to malnutrition and the health of the majority of population deteriorated. All building

57 Steele, 1997, pp. 50-51, 189.

58 Author's inspection of Al-Razik houses in 2000. Further research is needed to explore other houses for Al-Razik in the region, which might be built by Fathy.

projects stopped and the importation of building materials such as timber and steel ceased.[59] All that Fathy had available as a building material was mud brick. It was suitable to build walls, but he was determined to find a way of using this material for roof construction. He thought of covering his houses using vaults, the same as his forefathers once had, but timber shortages meant he had to confront the problem of making vaults of mud brick without using centring.[60]

The drive for economic independence was also reflected in the agriculture exhibitions organised by the Ministry of Agriculture in conjunction with the Royal Society of Agriculture every five years after 1924.[61] Their main objective was to develop the quality of agricultural products by building experimental farms.[62] As a result of this initiative, in 1941 Fathy got the opportunity to experiment with his new ideas when the Royal Society of Agriculture commissioned him to build a farm in Bahtim, a village near Cairo (ills. 18-19). All the buildings were made of mud, but after repeated attempts to build vaults without centring, Fathy and his masons realised they lacked the skills required for the task. Consequently, the roofs of all the buildings collapsed and all that remains are the walls.[63] Fathy's failure in this project was to be a milestone in the evolution of his building technique. It focused his mind on finding a method of constructing domes and vaults without centring as a practical solution to the shortage of building materials.

At that time, Fathy's brother Ali, was a director working on the Aswan Dam. His brother heard of Fathy's construction difficulties, listened sympathetically and then told him that the Nubians (Nubia is a village west of Aswan, Upper Egypt) were building vaults without using any centring.[64] Fathy's hope of finding a solution to his problem was renewed and he went to Aswan, Luxor and Nubia with a group of students and teachers from the School of Fine Arts on a study tour of archaeological sites.[65] This tour

59 Vatikiotis, 1980, pp. 294-295, 324.
60 Fathy, 1973, pp. 5-6.
61 Vatikiotis, 1980, p. 323.
62 Author's interview with Mahmoud Ahmed Mohamed Foreag, a farmer, who still lives in the ruins of the Royal Agricultural Farm, January 2000.
63 Fathy, 1973, pp. 5-6.
64 For a detailed description of the Nubian process of constructing a vault without centring, see Appendix 4.
65 Fathy, 1973, p. 6.

provided the key to Fathy's success because there he discovered ideas which, although provincial and out-of-date, brought about a remarkable transformation in his thinking about architecture. It also showed how the thinking of a profoundly educated architect was transformed through understanding a totally different local building tradition.

Nubia was the second substantial influence on Fathy's thinking as well as on the formation of his architectural approach. The village lies west of Aswan, in the south of Egypt. Fathy was surprised by the spacious, clean and harmonious houses of the village. He was also impressed by the brick vaults of the houses as well as their doorways decorated with claustrawork (ill. 20). Fathy believed that in Nubia he was

> looking at the living survivor of traditional Egyptian architecture, at a way of building that was a natural growth in the landscape... It was like a vision of architecture before the Fall: before money, industry, greed, and snobbery had severed architecture from its true roots in nature.[66]

Nubia's varying architectural elements provided a considerable range of architectural solutions to Fathy. Continuity with the past was reflected in numerous ways. Natural surroundings provided Nubia with raw materials for ancient crafts such as mud-brick. Perfectly adapted to their environment, the Nubian traditional dwellings incorporated dried mud-brick and wood. Elements of their houses such as the internal court were determined by the prevalent climate. Roofs could be flat or vaulted and were used for houses. Domes were used only in religious buildings such as mosques and tombs of the holy people. Floors were mainly of pressed earth. Because windows were small and admitted little light, most activities took place in the outer courtyard. Because they were made of local materials such houses were inexpensive. Walls were made of mud-brick to keep the interiors cool in summer and warm in winter. Strong emotional and spiritual ties bound families to their houses and their land. These elements were to become an important part of the vocabulary of Fathy's architecture which he effectively employed in many of his subsequent works.

In Aswan Fathy's main concern was to find the mason who knew the secret of building these vaults and domes. During his stay in Aswan he was influenced by the Fatimid

66 Ibid., p. 7.

Cemetery, dating from the tenth century and built completely from mud brick (ill. 21). It is characterised by its magnificent vaults and domes which were "employed with splendid assurance and style". Fathy was also influenced by the Monastery of St. Simeon, a Coptic building of the same period (ill. 22). Here, also, mud brick domes and vaults were significantly employed. Fathy recognised that "the simplicity and humility of the monastic ideal is revealed in the architecture, which thus proves able to accommodate equally well the contrasting inspirations of the Moslem and Christian religion".[67]

Fathy was also impressed by a refectory in Aswan. It occupied a gallery, supported upon a system of vaults. For Fathy this building represented clear evidence that mud brick buildings could be built up to two stories. These buildings supported Fathy's belief that the traditional materials and methods of building of the Egyptian peasant were appropriate for use by modern architects. Fathy believed that "the solution to Egypt's housing problem lay in Egypt's history".[68]

In Luxor, Fathy had been surprised by the granary of the Ramesseum with its long vaulted storehouses (ill. 23). It was built of mud brick 3400 years ago, proving the durability of this substance. Similarly, in Touna Al-Gabal, a village near Luxor, Fathy found buildings constructed 2000 years ago with vaults that support a staircase (ill. 24). This tour in Aswan and Luxor gave Fathy proof of the prevalence of vault construction throughout Egyptian history. It also revealed to him the limitations of education in the School of Architecture, where he was taught that the Romans invented arched construction.[69]

The outcome of Fathy's trip to Aswan was immense. It established a firm basis in his work and led him to recognise and appreciate the hitherto ignored vernacular vocabulary and building techniques of the Nubian villages. In addition, he had also met masons from Aswan. Fathy asked these masons to work with him on the collapsed farm buildings of the Royal Society of Agriculture. They worked skilfully without any tools

67 Ibid., p. 7.
68 Ibid., pp. 7-8.
69 Ibid., p. 8.

except the adze. He explained that the masons were working with remarkable intuitive understanding of the laws of statics and the science of resistance of materials. Within a few days they completed successfully all the farm buildings. Fathy admitted that they solved all his problems as well as giving "promise of a new era in building".[70]

One of the first projects to be realised as a direct result of the Royal Society of Agriculture prototype was the Hamed Said house in 1942 (ill. 25). Said was a close friend of Fathy and was also concerned with the issue of national identity. He and his wife, Ehsan Khalil, were both artists who lived in a studio called 'Tangezia' in a quiet area in the Muqataam Hill in Cairo. Because a highway construction necessitated the demolition of their house,[71] they were searching for another isolated location in the countryside. Some relatives of Said, who had a farm in Marg, a village outside Cairo, offered him land to build his studio. Said lived in a tent on the farm with his wife partly because he was an artist who loved to live near nature and partly because he could not build a house. Fathy used to stay with them in this tent to get a better understanding of the character of the area before commencing the formal design process.[72]

The Said house was one of the most important projects in Fathy's career because it was the first application of mud-brick construction and represented the first step in his return to a traditional approach of house construction. Fathy responded to the landscape, the earth colours and the trees and attempted to translate his understanding into an inward-looking house. The Said house was constructed in two phases (ill. 26). The first section, to be used as a retreat, was completed in 1942 while the second phase was added in 1945, so that the house could be used as a permanent residence. During the design process Said was both critical and encouraging. He believed that this house "is a kind architecture - not aggressive - a humble architecture. It grows with knowing, like a good friend".[73] The plan of the first phase consisted of one large domed studio, a vaulted bed *'īwān*, built-in cupboards and an open-ended loggia as an open exterior sitting area, which overlooks a peaceful and continuous view of green fields.[74] The new parts

70 Ibid., pp. 8-11.
71 Steele, 1997, p. 54.
72 Fathy, 1973, p.12.
73 J. M. Richards, I. Serageldin and D. Rastorfer, *Hassan Fathy*. London, 1985. p. 161.
74 Fathy, 1973, p. 12.

included a top-lit gallery and a large studio near the old one on one side of the courtyard. On the other side Fathy grouped a moderate-sized kitchen, a dining room, a bathroom and one bedroom.[75] Said explains that the main concept of a house is to be a symbol of love and intimacy as well as the accommodation of art, which serves both love and life. However, he believed that the architect should not impose a prototype for all, but should understand the needs and requirements of each person and then translate them into architecture.[76] In this, both Said and Fathy rejected the modern movement belief in the ability of standardisation to fulfil human needs.

The commissioning of the Said house coincided with a growing mood of national concern among Egypt's intellectuals. Their main aim was to identify the effects of industrialisation on the traditional culture of Egypt. After the completion of the house, Said regarded it as a restatement of the original agrarian roots of Egyptian culture. The courtyard of the house became the venue for the regular weekly meeting of a group who called themselves the 'Friends of Art and Life' (ill. 27). Fathy frequently attend these meetings, which were headed by Said, to discuss a wide range of subjects. The group included artists, architects, sculptors, weavers, potters, philosophers, writers, photographers and film makers.[77] Bossaina Abdel Gawwad Ahmed, Professor in the Faculty for Arts Education, Helwan University, Egypt, acknowledges her affiliation to 'Friends of Art and Life'. She believes that her book *Spangling as a Folklore* (1992) would not have been possible without their constant help and support.[78] The main aim of her book has been to expand and develop the art of spangling "to pervade local and foreign markets".[79] The group believed that the main aim of all artistic endeavour, but especially architecture, should be the integration of people with their environment. They regarded the architecture of the Said house as a true expression of their principles and the group's meetings still take place there.[80]

Said argued that in the past artists were concerned with expressing a unified reality

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75 Steele, 1997, p. 58.
76 Author's interview with Hamid Said in 2000. See also his book , *The Contemporary Art*. Cairo, 1962, pp. 1,4.
77 Steele, 1989, p. 15.
78 Author's interview with Bossaina Abdel Gawwad Ahmed, 2000.
79 Bossaina Abdel Gawwad Ahmed, *Spangling as a Folklore*. Cairo, 1992, p. 81.
80 Steele, 1997, p. 58.

which did not break with the tradition of a society. However he regarded artists in the modern world, who do not positively contribute to their culture, as 'fractional'. He also explained that the main focus of their meetings was to promote the integrity of the work of the group rather than the individual, as well as to value and appreciate traditional artifacts.[81] Sadly, the house that was once such an excellent expression of Fathy's ideas and Said's ambition to establish a meaningful relationship between man and the surrounding environment, has been surrounded by the meaningless urban sprawl of Cairo (ill. 28). Even the open loggia, which was the main entrance to the house and a place from which to overlook the fields, has been filled in to block out the ugly surrounding view (ill. 29).[82]

Fathy's next experiment with domes and vaults after the Said house was a farm built in 1942 for his friend, Taher Al-Emari, for whom he had previously built a house in 1937. Al-Emari asked Fathy to build roofs for the existing buildings of his farm in Sedmant Al-Gabal on the edge of the desert of Fayum, near Cairo. It perched on a cliff-like edge overlooking a canal and the Nile valley. Al-Emari was disappointed because the roofs of the farm had been stolen by the local peasants, who coveted the wood. For Fathy this situation was "a perfect subject for my masons' next demonstration". The original buildings of the farm included houses for the workers, storehouses and stables, but all of them were without roofs. In no time Fathy was able to cover the whole farm with fine mud roofs. Al-Emari was pleased and captivated with a beautiful dome-roofed building which was intended to be used as a store house but which he used as a music room.[83]

The buildings of Al-Emari farm showed that mud brick houses, besides being cheap, were also beautiful. Fathy believed that the vaulted buildings, whether constructed for animals or human beings "had a satisfying curving rhythm... which straight lines and flat roofs hardly ever produce". Fathy argued that the beauty of these buildings comes mainly from the structure and material. The structure determined the shape and the material set the scale, where every line considered the distribution of stresses to produce a natural-shaped building. The structural elements also provided continual attraction to

81 Steele, 1989, p. 15.
82 Author's visit to the house in 2000.
83 Fathy, 1973, p. 11.

the eye. The dome, the vault, arches, squinches, pendentive and the wall are all distinctive elements that allow the architect to produce harmonious blocks.[84]

In the same year, when Fathy was building the Said house, a sudden flood swept away a little village called Ezbet El-Basri. This village consisted of about twenty-five houses, situated in Ma'adi, a suburb near Cairo. The Ladies Committee of the Egyptian Red Crescent had undertaken the responsibility of rebuilding the village to re-house the homeless families. Fathy visited the devastated village and investigated the main reason for this disaster. He found that the houses were built of only one thickness of mud-brick, which was insufficient to resist the flood. It seemed to be an excellent opportunity for Fathy to demonstrate the versatility and economy of his new discovery. Fathy prepared his suggestions and designs for rebuilding the village as well as an estimate of the expected cost. He submitted his offer to Mrs. Sirry Pasha, the president of the committee,[85] and wife of Husayn Sirry Pasha, Head of the Egyptian Cabinet at the time.[86]

Many meetings were held to discuss Fathy's proposal, but nothing was done. When Fathy "begged to be allowed to build at least one house just to show it could be done" Mrs Aboud Pasha, an English woman and wife of a wealthy business man said to Fathy:

> You seem to be a practical sort of man. Here, take my checkbook. Write what sum you like, take the money and go and build us your house.[87]

This farsighted gesture by a foreigner contrasted with the short-sightedness of Fathy's compatriots. It can also be seen as the first appreciation of Fathy's ideas by someone from the West.

Within only forty days Fathy succeeded in building his model house (ill. 30). Although restricted by a low budget, he was able to show the suitability of mud-brick as a construction material. The model house was L-shaped in plan with an enclosed private courtyard. It consisted of two large bedrooms with sleeping alcoves, kitchen-dining room, bathroom, built in cupboards, large storage space, big loggia and an enclosed

84 Ibid., pp. 11-12.
85 Ibid., 1973, p. 13.
86 Vatikiotis, 1980, p. 346.
87 Fathy, 1973, p. 13.

courtyard. The house also showed hints of new ideas to come, such as the sleeping alcove, the indirect entry, the claustra-work and coloured-glass inserted in the dome.

The model was admired by some members of the committee and consequently Fathy expected to be commissioned to complete the whole village. But again and unexpectedly the president of the committee rejected Fathy because they had their own architect who had already designed houses to be built of reinforced concrete (ill. 31). Unfortunately, the Red Crescent were also advised by their architect to demolish Fathy's model house because it did not harmonise with the new designs. The new plans showed a row of twenty houses erected of concrete. Each house consisted of two square rooms and a corridor ninety centimetres wide with a water closet at the end of it, but no kitchen. For Fathy these new houses "were no more inspiring architecturally than a row of air-raid shelters. I quite saw that my house did not harmonise with them".[88]

If this short-lived model house in Ezbet El-Basri failed to impress the Red Crescent, it did succeed in impressing other people and led to another important commission. In 1942 the Chilean Nitrate Company, which was impressed by Fathy's model design, commissioned him to build a modest rest house for the staff in Safaga, a city on the Red Sea Coast, midway between Luxor and Cairo (ills. 32-33). Fathy perceived this job as an opportunity to experiment with his traditional vocabulary in a relatively large-size project and to expand his team of masons as well as to test further their capability of building by using the Nubian construction method that was used in the Royal Society of Agriculture farm and the Said house.[89]

During the period between 1942 and 1945 Fathy produced a sizeable number of houses including the Hamdi Seif Al-Nasr house (ills. 34-36) and the Kallini house (ills. 37-39). In these houses Fathy's approach went beyond the use of domes and vaults. He had undertaken an extensive survey and study of medieval Cairo architecture of the Mamluk and Ottoman times, and this had a strong influence on the development of his ideas, leading to the introduction of important new elements. These were the *qā'āh* (the main

88 Ibid., pp. 13-14.
89 Ibid., p. 14.

hall in a house), *dūrqā'āh* (centre square of *qā'āh* roofed with dome), *'īwān* (recessed area adjoining *qā'āh*), *malkaf* (wind-catch) and the relationship between the formal area of a house and the external courtyard. This profound change resulted from a development in his design principles in terms of space planning. Fathy demonstrated his careful articulation of spaces as well as his further development of the idea of the privacy of the family which was to become a pivotal element of all his subsequent work.[90]

What is remarkable about Fathy's early career is not only his obvious energy for work but the high level of creativity. Fathy revealed both an endless capacity for invention but an uneven level of realisation. His buildings also illustrated his extraordinary sensitivity, creative power and receptivity to the wonders of nature. His work of this period provided the foundation for his new approach to design which depended upon his early collective discoveries. With the economy of using mud-brick, the Nubian building methods, the spatial and environmental principles of the houses of old Cairo, such as the relationship between the courtyard, wind-catch and the *qā'āh*, and the concept of privacy, Fathy was sufficiently equipped to initiate a new phase in the development of his career.

90 For more details about Fathy's typology, see Chapter 5.

CHAPTER TWO

THE CHALLENGE: PRACTICAL EXPERIMENTS 1945-1957

The years between 1945 and 1957 represented a crucial period in Fathy's career. He was confronted with almost all types of buildings including residential buildings, commercial buildings, villages and even a tomb. The climax of this period was the New Gourna village (1945-1948), through which he experimented with and tested his traditional forms and method of construction (ills. 41-59). The village of Gourna, which New Gourna was intended to replace, is built on the site of the ancient town of Thebes (ill. 40). It lies across the River Nile from Luxor, in the south of Egypt. It comprises the Valley of the Kings to the north, the Valley of the Queens to the south, and the tombs of the Nobles in the middle on the hillside. Old Gourna village is built on the site of these tombs of the Nobles and was inhabited by about seven thousands peasants whose houses are built around and over these tombs. The economy of this community was mainly based on the mining of these tombs and the selling of their priceless contents.[1] The siting of the village presented a major problem for the preservation and scientific investigation of these major archaeological sites.

Continuous tomb robbing had led the Department of Antiquities to take positive action to overcome the problem of Gourna. They asked the Egyptian government to move the villagers in order to facilitate the continuity of excavations. A government commission studied the problem and decided to construct a whole new village or series of villages to accommodate the villagers.[2] It happened that before the demolition of Fathy's Ezbet El-Basry model house (1942), Osman Rustum, the head of Engineering and Excavations and M. Stopplaere, the head of the Restoration Section in the Department of Antiquities, had seen the model-house and were impressed by its design and materials. Both suggested to the Abbé Drioton, the director general of the department, that Fathy should be asked to design the new village of Gourna. Drioton had also seen and admired the houses of the Royal Society of Agriculture (1941) and was impressed specifically by the

1 Fathy, 1973, p. 15.
2 Villiers Bergne, Modern Village with Tradition. *Parade*, 1 March 1947, p. 9.

potential of mud-brick as a building material and the low cost of using it. Accordingly, Drioton commissioned Fathy to build New Gourna village and consequently he was granted leave of absence from the School of Fine Arts for three years. "So I was going to fulfil my childhood wish". Fathy believed that he had been commissioned to build the village "not indeed out of antiquarian interest, but with a view to fulfilling a very practical and interesting need".[3]

For Fathy the project was very attractive and offered the opportunity to achieve his dream of building a whole village, but his "delight had from the beginning been flavored with more than a dash of incredulity". But, it was not an easy task for Fathy to be presented with fifty acres and seven thousand Gournis, who would have to resettle themselves in a new place. Fathy argued that

> All these people related in a complex web of blood and marriage ties, with their habits and prejudices, their friendships and their feuds – a delicately balanced social organism intimately integrated with the topography, with the very bricks and timber of the village – this whole society had, as it were, to be dismantled and put together again in another setting.[4]

Confronting the actual case of Gourna, Fathy began to think more practically about solving the problem.[5] He wrote a poem that summed up the process of decision making.

> Culture springs from the roots
> And seeping through to all the shoots
> To leaf and flower and bud
> From cell to cell, like green blood,
> Is released by rain showers
> As fragrance from the wet flowers
> To fill the air.
> But culture that is poured on men
> From up above, congeals then
> Like damp sugar, so they become
> Like sugar-dolls, and when some
> Life-giving shower wets them through
> They disappear and melt into
> A sticky mess.[6]

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3 Fathy, 1973, pp. 14-17.
4 Ibid., p. 17.
5 For more details about the architecture and the planning factors of New Gourna, see Chapter 6, pp. 155, 160, 170, 175, 177.
6 Fathy, 1973, p. 21.

Fathy approached his task of building the village from two distinct perspectives. The first concerned the socio-economic problems involved as well as the health of the community. The other was an architectural one, in terms of producing housing appropriate to the life style of its occupants. Despite Fathy's good intentions and enormous effort over three years to realise this project, it did not come to fruition and the village was only partially built. In *Architecture for the Poor*, Fathy described in detail the obstacles and frustrations he faced from both the authorities and the villagers. The government stopped supporting the project while bureaucrats plotted against Fathy and let the project of New Gourna die. Despite Fathy's effort in improving his designs to fit perfectly the families that would live in them, he could not interest the peasants of Gourna in his houses. The negative attitude of the Gournis arose because they saw Fathy as an agent of the government, who was doing everything to shift them from their place. Fathy argued that this initial failure was not only the result of their reluctance to do anything which might later be taken as an acceptance of the plan for removing them, but also due to their inability to put their needs into words. Nor were they able to talk about the materials, the style or the beauty of their houses. Fathy believed that a "peasant never talks about art, he makes it". As a result of all these difficulties Fathy lost an element essential to the harmony of the building process. He believed that client, architect and craftsman, each in his area, should make decisions concerning the project. And if one of them ignored his responsibility, "the design will suffer and the role of architecture in the cultural growth and development of the whole people will be diminished".[7]

When Fathy found that even the peasants were opposing his village, he began to question the use of mud-brick vault and dome construction. He realised that, although it was sound aesthetically and economically, it might carry some suggestion of the tomb. In Arabic a tomb is called a *qūbbāh* (dome) and it is usually a domed chamber containing one or more tombs. The structure of a tomb is sometimes of considerable beauty, a matter that attracted Fathy, but it is a characteristic of the dead.[8] On the other hand, Fathy realised that domed roofs were used in dwellings in Syria, Sicily, the

7 Ibid., p. 40.
8 Richard B. Parker, Robin Sabin & Caroline Williams, *Islamic Monuments in Cairo: a Practical Guide*. Cairo, 1985, p. 34.

Aegean and Italy without any reference to the grave.[9] R. A. Schwaller de Lubicz, the founder of a school of Egyptology, whose interpretation of Egyptian symbols, penetrated to the mode of thought of the Ancient Egyptians, was a close fried of Fathy. De Lubicz visited Fathy in the New Gourna village and was impressed by the domed buildings, but he confirmed that the semicircular vault might have been inappropriate because it was associated with Osiris and death. However, he advised Fathy that the use of any sort of pointed, parabolic, or segmental arch would not carry any symbolism of death.[10]

At that time, Fathy was out of touch with the meaning and symbolism behind these forms because he was very concerned with solving his technical architectural problems as well as excited at seeing his buildings coming up to prove his success and creativity. However, De Lubicz's studies and observations revealed to Fathy a new conception of forms. It also opened vistas and raised questions on meaning in architecture as well as showing Fathy that these forms were not merely employed for purposes of construction. Fathy did not repeat this mistake and his main concern, besides providing appropriate materials and methods of construction, became preserving meaning in architectural forms. This was evidenced in his subsequent studies of Islamic architecture, where he did not perceive the spaces and forms of the old buildings as merely sculptural forms or as a signpost of culture, but investigated them in greater depth to understand their meaning and symbolism.[11]

Schwaller de Lubicz's extensive studies, such as *Le Temple de l'homme* and *Le miracle égyptien* are as important as Champollion's description of the Rossetta Stone.[12] In his study *The Temple in Man*, De Lubicz suggested that the Pharaonic Temple was built according to the mathematical relationship between the three distinct parts of the human body; the legs, the thorax and the head. Fathy was influenced by de Lubicz's theories and applied these mathematical relationships in his study to the old structures.[13]

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9 Fathy, 1973, p. 185.
10 Ibid., p. 185.
11 For more discussion of symbolism and meaning in architecture, see Chapter 7, pp. 187-190.
12 Fathy, 1973, pp. 178-179.
13 Steele, 1997, p. 88.

The New Gourna village attracted the notice of King Farouk himself, and Fathy was asked to return to Cairo to report on its progress. Fathy's absence provided an opportunity for the Gournis, who broke the dikes and flooded the village. However, with enormous effort Fathy was able to drain the water away and to restore the foundations of his buildings. Again there was increasing obstruction from the Department of Antiquities, which led to the project coming to a standstill.[14] Fathy stated that he learned more from the struggle than he would have had his path been perfectly smooth. He also believed that his disappointment at Gourna had increased his understanding of the problems of rural housing.

> For the problem is concerned with more than just [the] technical or economic; it is primarily human, embracing systems and people, professionals as well as peasants. It is much greater than Gourna and the Department of Antiquities.[15]

New Gourna Village had been transferred to the Department of Housing, which preferred to use concrete rather than mud-brick. Fathy described this attitude as "wildly impracticable, a modern version of Marie Antoinette's 'Let them eat cake'". Effectively, Fathy's notion of mud brick construction and his attitude to rural housing were condemned in Egypt as impracticable. Consequently, Fathy was told either to return to teach in the School of Fine Arts or to work permanently for the Department of Housing. Fathy returned to teaching with relief, but with the feeling that teaching brought little reward, "I was trying to teach something I had failed to do myself, and grew increasingly anxious and impatient".[16]

Ironically, Fathy's research and ideas in New Gourna Village were not presented in Egyptian periodicals, because of the lack of interest in his approach. However, his work was featured widely in many international publications at the time of its construction. While Villiers Bergne of *Parade* believed that, in the New Gourna village "tradition and modernism are combined",[17] Raymond Mortimer of *The Architectural Review*, described the village as a "remarkable work of art". In 1947 Mortimer visited the village

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14 Fathy, 1973, p. 174.
15 Ibid., p. 193.
16 Ibid., p. 183.
17 Bergne, *Parade*, 1 March 1947, p. 8.

and slept in one of the vaulted recesses of a square, domed room. When he got up early, he watched from the roof, "the dawn bright above the other side of the Nile, and then the majestic hills above old Gourna rose-coloured as they caught the sun". He argued that no "wonder that the Pharaohs chose it for their temples and their tombs?[18]

Fathy's experiment in New Gourna village inevitably fused his architecture with the meaning of the human situation. However, the forms of his architecture created during the 1940s can not be understood apart from the social ideals which gave rise to them. The vernacular vocabulary was not, of course, his only preoccupation but it was certainly a major one from which he evolved a philosophy and set of forms well suited to the expression of the identity of his country. For Fathy the lessons gained from new Gourna were to be seen in its architectural vocabulary, especially in the assembly of vaults and domes. These elements demonstrated the chief virtues of mud-brick such as economy of materials and equilibrium of forms and masses. These virtues were not clear to the modern architects in Egypt who, by contrast, found them disturbing and not representing good building. During his work in New Gourna village Fathy produced little other work although he designed a small number of private projects which also showed his interest in vernacular forms.

In 1946, Fathy was confronted with designing a new type of building. When his brother-in-law, Ahmed Hassanein, was killed in a mysterious car crash on Kasr El-Nil Bridge, the palace asked him to build a mausoleum as a memorial for Hassanein (ill. 60).[19] The mausoleum was located at the border of the 'City of the Dead' at Salah Salem highway on the way from the city centre to Cairo airport. The previous literature on Fathy, including Steele's *A Catalogue of Visual Documents* did not include any documented photographs of the tomb. It is likely that the tomb was not visited before and that Steele's account, which only referred to the architectural style of the tomb, depended only on the remaining elevation. Through the author's involvement with

18 Raymond Mortimer, [New Gourna village], *The Architectural Review*, September, 1947, p. 6. New Gourna village was also featured in Tradition Égyptienne. *Plaisir de France*, no.155, November 1950, p.33. (in French), and Een Modderdorp Aan De Nijl. *Katholieke Illustratie*, no.52, 29 December 1950, pp. 2072-2073. (in German).

19 Fariborz Atapour, Hassan Fathy of Egypt: Building for the People. *Kayhan International*, 7 October 1974, p. 4. According to Fathy's nephew, Fathy and his wife brought up Hassanein's daughters, Jayida and Nazli.

Fathy's circle and with the help of Dr Nawal, Fathy's friend, the tomb was found and photographed in 2000. This in turn allowed for a full description of its physical characteristics. Fathy was influenced by the style of the Mamluk's mausoleums, which characterised this area between the twelfth and fifteenth centuries. The Hassanien Mausoleum was similar to them and stands as a landmark on the edge of the street and attracts the eye from afar. Fathy's design was simple and consisted of a cube crowned with a cupola, which gave the mausoleum a highly visible exterior profile. The transition between these two parts was mediated by an octagon. The exterior of the dome is carved and its corners are chamfered, incorporating features introduced in the Fatimid period. The windows are arched with rounded openings above.[20] This was the only mausoleum that Fathy built during his entire career.

In the following year, Fathy's friend Taher Al-Emari, for whom Fathy built a farm in 1942, introduced his brother-in-law Tusun Abu-Gabal to Fathy. Abu-Gabal admired the buildings of Al-Emari's farm and asked Fathy to build a house for him (ill. 61).[21] The house was intended to be located along the Nile Road in Giza near Cairo. The exterior of the house is reminiscent of that of the Kallini house (1945), but the walls were constructed out of stone, the flat roofs from concrete and the dome from baked-brick. The house was conceived as two floors. The ground floor consists of an entrance hall, which leads to the family room in the centre of the plan (ill. 62). It is a domed *qā'āh* flanked by two vaulted *'īwāns* on opposite sides. On the other two sides, Fathy situated the dinning room on a different level on one side and the formal reception area on the other. The roof of the dinning room is flat with exposed timber beams and overlooks the *qā'āh* through a delightful pointed arch. Like the family room, the formal reception room consists of a domed *qā'āh* in the centre flanked by two vaulted *'īwāns* and opens into a large arcaded terrace. Although the terrace was intended to allow views to the river Nile, it is now closed by glass windows to provide more privacy.

20 Author's visit to the tomb, 2000.

21 Author's interview with Tusun Abu-Gabal, 2000. Like the Hassanien Mausoleum, there are no documented photographs to the house in the previous literature on Fathy including Steele's *A Catalogue of Visual Documents*, although the location of the house is mentioned in it. The author was able to obtain rare photographs at the house at the time of its completion.

From the entry hall, a three flight U-shaped staircase leads to the first floor and continues to the roof, where Fathy situated the servants' rooms. The first floor consists of a hall, service area and three bedrooms arranged around an open courtyard (ill. 63). Abu-Gabal's interest in the Islamic style made him responsible for carrying out the internal decoration. He covered some walls with ceramic tiles brought from Spain and with arrangements copied from the Alhambra Palace (ill. 64). He also made the *māshrābīyyāhs* out of old panels bought from *Khān Al-Khālī lī* (an old district in Cairo famous for shops selling the leftovers of demolished old Islamic houses). Like the Kallini house the Abu-Gabal house included many features such as *māshrābīyyāhs*, wooden railings for the balcony and pointed arches, which subsequently were to become hallmarks of Fathy's domestic work. Abu-Gabal's interest in Fathy's work led him to invite Fathy to his farm in Dayrout, Upper Egypt, where Fathy had made some modifications and additions to the existing building in order to give them an Islamic character.[22]

The Eid house was another exercise that shows the development of Fathy's work. In 1948 Mrs Raymond Eid asked Fathy to design a house on her farm on Zagazig, in the north of Egypt. Three different plans of this house have survived. Although contrasting in character, the concepts of the plans are similar. Each plan consists of projecting wings that surround a central *qā'āh* and three separate external courtyards. The roof in each case varies, two being domed and the third flat.[23]

Although Fathy separated from his wife (c.1946), she asked him to build a house for her in 1949. The house occupied a distinctive site next to the River Nile in Maadi, a suburb near Cairo and was built of white limestone. While the facade facing the roadside was a blank wall to maintain the privacy of the house from the passers-by, the facade facing the River Nile had more openings covered with *māshrābīyyāh* to take advantage of the magnificent view of the river (ill. 65). This pattern of closed public side and open private side was employed in much of Fathy's subsequent work. Like Abu Gabal house,

22 Ibid. The additions and alterations of Abu-Gabal's farm in Dayrout are not mentioned in the existing literature on Fathy.

23 Steele, 1997, p. 192.

Fathy used different levels in a more direct way to achieve the spatial separation (ill. 66). He also used intricate tile and floor patterns, which represented an important element of the spatial design of his previous work.[24] Fathy's wife's house was the meeting place of the artistic and intellectual elite of Cairo. Among them was the composer Ignace Tiegerman (1893-1968), student of the eminent composer, Friedman Ignaz. Tiegerman was a Jew from Poland, who departed from America to settle in Cairo in 1931. He lived in Helwan, where Fathy's family had lived and this is probably the reason for his acquaintance with Fathy. Fathy's wife used to invite Tiegerman to play his music in the domed room. She believed that a state of silence and ecstasy would descend on listeners as Tiegerman played his music. Tiegerman was also the piano teacher of the author and literary scholar, Edward Said, who spent his youth in Cairo.[25] There is no evidence of a friendship between Said and Fathy, but he was part of the intellectual circle that Fathy was involved with.[26] Unfortunately, the Hassanein house was demolished because of road widening in 1951. Fathy designed another small house for his wife near the present metro station of Maadi, which has been completely changed and is now hard to recognise.[27]

By the early 1950s the political scene in Egypt was dominated by the British occupation and the palace represented by King Farouk. However, Egypt was experiencing a period of economic depression and there was little progress in many aspects of life. Egyptian architects were responding to an influx of overseas movements such as the post-Corbusian phase of Modernism and the works of individual architects such as Frank Lloyd Wright. In the meantime, Fathy had achieved a clearly recognisable style, a distinctive language of forms and an individualistic approach to traditional forms. He repeated and gradually developed the architectural elements which dominated most of his work in the 1940s. In fact his architecture has never changed dramatically but has rather evolved gradually.

In 1950 the Jesuit Mission intended to improve the standard of living of the people in Garagus, a small craft-based rural village in Upper Egypt which relied solely on

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24 Ibid.
25 Tiegerman: The Lost Legend of Cairo, 1999. www.arbiterrecords.com
26 Edward Said in correspondence with the author, 10 July 1999.
27 Steele, 1997, p. 192.

agriculture for its livelihood. Father de Montgolfier, a priest who ran a small dispensary at Garagus, across the Nile River to the north of Luxor, was impressed by the architectural style as well as the low cost of New Gourna. He approached Fathy to design a crafts-based factory to produce ceramics in order to broaden the economic base of the village (ill. 67). Father de Montgolfier also invited his nephew, who was a potter, to come from Paris, and together with Fathy, they built a very beautiful workshop.[28] Fathy's design was very clear and expressed the ceramic process from the delivery of the raw earth through to the glazing, firing and storage of the finished work (ill. 68). Fathy's concern with natural ventilation was obvious in the use of vaults as a wind-catch, a feature which was employed in a more developed version in New Bariz village in Kharga in 1967. During the construction both the plan and the composition of the masses of the facade were altered from Fathy's original concept.[29] Unfortunately, the Jesuits and the contractor took the design concept and rearranged the internal composition of the site plan without consulting the architect. In spite of these alterations, Fathy's creative force is still visible.[30] During his work on this project the Jesuit Mission also asked Fathy to build a cultural and health centre to serve the same village. Although never realised, the project included a church, crafts school and clinic.[31]

After the work stopped at New Gourna, most of Fathy's commissions came about through his social connections and personal recommendations. Three important commissions marked the 1950s; the Stopplaere house, the Monastirli house and the *Lulu'at Al-Sahara* (The Pearl of the Desert), his second community-orientated project near Cairo. While, working in New Gourna, Fathy had established a friendship with the archaeologist, Dr Alexander Stopplaere, who had previously recommended him as architect of New Gourna village. In 1950, on behalf of the Department of Antiquities, Stopplaere asked Fathy to design a building that could be used as a guest-house for the Department and an apartment for himself (ills. 69-70). Through several revisions, Fathy's drawings for this house show his struggle to integrate the duality of functions

28 Fathy, 1973, p. 65.
29 Steele, 1989, p. 21.
30 Richards, Serageldin and Rastorfer, 1985, p. 163. The factory is now owned and operated by the workers who also run a training program.
31 Steele, 1997, p. 193.

involved.[32] The surviving drawings of this house are for the preliminary sketches and provide insight into the creative thought of Fathy and how his ideas began to evolve according to the site conditions. The external appearance of the house is, therefore, important to understand the concept of its design. Indeed, the building subtly blends together sources derived from Egyptian vernacular architecture with the vocabulary of Islamic architecture. Although, like Fathy's previous houses, the Stopplaere house is composed entirely of familiar elements, including domes and courtyards, every one of these elements appears in a new form. This was how the elements of traditional architecture appeared to Fathy. Indeed Fathy's solution for the Stopplaere house was more than an assured personal statement; it marked a major step in the maturing system of forms that many other architects of the period had abandoned.

The Stopplaere house was followed by the Monasterli house of the same year, but in a completely different style. In 1950 Mrs Attiya Monastirli, then the wife of the Egyptian Ambassador to Turkey, asked Fathy to build a house for her on a very distinctive site overlooking the River Nile in Cairo (ill. 71). The Monastirli family gained royal favour through their excellent military service. They had been granted a piece of land to build a house on Roda island in the middle of the River Nile near the Nilometer. The site is a long narrow triangle shape, which is bordered by a main highway on one side and the edge of the Nile on the other as well as a neighbour side (ill. 72). They had first built an entertainment pavilion, which Fathy based his design on.[33] Monstarili admired the architecture of the Turkish palaces and houses along the Bosphorus in Istanbul. Therefore, she arranged for Fathy to visit Turkey for several months in order to study the architecture of this group of houses and palaces.[34] The result of this visit not only influenced Fathy's design but also meant a great deal to him because of his own Turkish background on his maternal side.[35]

Fathy's design was conceived as a three-storey house with an entry courtyard and a wing that stretches to the fence on the road side (ill. 73). Unlike Fathy's other houses of the period, the Monastirli house is less vernacular in inspiration and more ornate. The

32 Ibid., p. 91.
33 Ibid., p. 93.
34 Richards, Serageldin and Rastorfer, 1985, p. 162.
35 Steele, 1997, pp. 93,193.

facade on the road side seems formal and solid. It does not indicate the presence of either the internal courtyard or the pergola covering the outdoor court of the first floor (ill. 74). Despite being conceived as a response to the architecture of the houses along the Bosphorus, Fathy's extensive studies of Ottoman architecture in Cairo also influenced his design. He incorporated some of its architectural elements such as the ornate stained glass windows alternating with conventional fenestration as well as the wooden pergola over the first-floor courtyard. Regardless of the style and the material employed in this house, Fathy's design has met his environmental concerns and sensibilities to a large degree. The house was oriented towards the river breeze, thick walls were used to insulate the house from heat, the orientation of windows was carefully controlled and the roof was used as an outdoor sitting-room. The Monastirli house represents a philosophical deviation in Fathy's approach. Although more complex, the architectural character of this house relates to Fathy's earlier work during the transitional period of 1937 to 1940, such as Hayat house and Heshmat house.[36]

In studying the architecture of the Monastirli house, one thinks of the work of the Turkish architect Sedad Hakki Eldem (b. 1908) of the same period, in particular of his Taşlik Coffee house (1947-1948), which overlooks the Bosphorus (ill. 75). Like Fathy, Eldem was inspired by the traditional Turkish house and sought to revive his national architecture, but unlike Fathy he called for reconciliation between traditional and modern architecture. Eldem has drawn upon a wide ranging modern architectural vocabulary in order to demonstrate the contemporary potential of history. Although the structural frame was made of reinforced concrete, wood was employed extensively to express the influence of the vernacular Turkish house upon Eldem. The house is characterised by its wide projecting eaves, T-plan, modular arrangement of window and the wooden brackets supporting the front projection. Eldem's Taşlik Coffee house is "a statement of how that which is embedded in collective memory and culture, can unfold in a new fashion".[37]

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36 Ibid.

37 Sible Bozdogan, Suha Özkan and Engin Yenal, *Sedad Eldem, Architect in Turkey*. London, 1987. p. 50.

The widespread preoccupation with New Gourna village as the most elaborate community project in Fathy's career has tended to overshadow many other successful projects of various size and complexity. In 1950 Fathy was approached by Hafez Afifi-Pasha to design an addition to his recently constructed large farm complex, *Lulu'at Al-Sahara* (Pearl of the Desert), near Cairo. In the 1940s Afifi-Pasha had completed the construction of the worker's housing, workshops, animal shelters, grain storage, pigeon towers, clinic and a hospital. He intended to develop the building facilities of the farm and its social services. However, he asked Fathy to design six more housing units and a new mosque with an attached *mādrāsāh* (school) (ills. 76-79). All buildings exhibited Fathy's typological language such as domes and vaults.[38] Between *Lulu'at Al-Sahara* and his departure for Greece in 1957 Fathy did not realise any important residential projects, except for three small unbuilt houses. Fathy's documents show early studies for a two-storey house for the artist Shaaban Zaki (1951), rough sketches for the Alexandria rest-house in Aswan (1955) and plans for the Muhammad Musa villa, a two-storey building in Cairo (1955).[39]

When the revolutionary regime took over in 1952 under the leadership of Colonel Gamal Abd El-Naser (1952-1970),[40] it was faced with the problem of planning for future urban expansion. The country needed to regain its confidence, identity and consciousness after a long period of physical, political, religious and cultural repression. Since the Revolution, construction of "popular" housing had become an essential element of government policy, in which the Ministry of Housing was vitally involved.[41] Egypt also witnessed a tremendous upsurge of urban change and redevelopment. This was attributed mainly to the revolutionary government, which confiscated the land and properties of the monarchy and made them available to the public.[42]

The government initiated a low-income housing programme to overcome the housing problem in Cairo. This problem related to two essential elements; the housing volume and the housing demand. Neither of these elements offered much encouragement to

38 Richards, Serageldin and Rastorfer, 1985, p. 162.
39 Steele, 1997, pp. 193-194.
40 Vatikiotis, 1980, p. 376.
41 Abu-Lughod, 1971, p. 166.
42 Ibid., p. 157.

those seeking simple solutions.[43] The government-housing plan consisted of identical four or five storey blocks.[44] Fathy opposed this idea of identical modern blocks. He argued that if a governmental architect were confronted with the problem of housing a million families, he would design one house and then add six zeroes to it. In doing this the architect ignored the different kinds of families that go into the building and "the role of architecture in the cultural development of the country will be diminished". He also believed that people who are living in rows of identical blocks "will grow dull and dispirited like their houses, and their imagination will shrivel up".[45] Fathy hoped that the government would change its attitude towards housing and be aware of the fact that a house is the most enduring witness to human existence and its possession represents "one of the most effective guarantees of social stability".[46]

Although Fathy's vision was directed to the inherent tradition of cities, he sought reconciliation between technological, social and aesthetic facets. Fathy admired the work of other modernists, but he differed from them in accepting urbanism as both necessary and potentially life enhancing. In the 1950s Egyptian architects adopted Western urban renewal ideas, such as the philosophy of functionalism in architecture and urban planning. In *Postmodern Urbanism*, Nan Ellin argued that architects and planners who followed this dogma "were designing for an ideal man rather than for real people" and were searching for universal solutions. Ellin explained that architects' buildings also stood alone and did not refer to their particular environment either physically or socially.[47] However, the Egyptian modernists' interpretation of Fathy's traditional approach has tended to suppress the relation of his artistic practice to everyday life and to a specific place. They have regarded his architecture and ideals as irrelevant to the basic context of Cairo and the Modernists' view.

This is not to suggest that there was a wholesale abandonment of traditional architecture and crafts by Fathy's contemporaries. Like Fathy, his friend Wassef rejected modern Egyptian architecture and was concerned to develop traditional mud brick architecture.

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43 Ibid., p. 164.
44 Moustafa Mourad, Egypt. *The Architectural Review*, v. clxxviii, no. 1062, August 1985, p. 20.
45 Fathy, 1973, pp. 30-31.
46 Ibid., p. 33.
47 Nan Ellin, *Postmodern Urbanism*. Cambridge, Mass., 1996, pp. 186-187.

Unlike Fathy, Wassef's ideas did not spread and were limited to one area of reviving the traditional crafts. In 1952 Wassef opened his own arts centre in Harraniya, a village near Cairo (ill. 80). It was an experiment which reflected Wassef's longing to preserve Egyptian national culture. Located on a plateau of green fields, dotted with palm trees, the centre is a lush oasis consisting of delightful domed and vaulted buildings and quiet gardens. Evolving over about fifty years, the centre now comprises a workshop, showroom, a pottery, sculpture museum, houses and farm buildings. Wassef's centre is known world-wide for its intricate products of woven wool rugs, which depict Egyptian rural life and folklore.[48] In 1983 Wassef's centre was awarded the Aga Khan Award for Architecture for "the beauty of its execution, the high value of its objectives, the social impact of its activities as well as the power of its influence as an example".[49]

In 1953 Fathy returned to teaching at The Faculty of Fine Arts, Cairo and in 1954 he was appointed the Head of the Architectural Section for a three-year term. The Faculty of Fine Arts is one of the leading schools of art and architecture in Egypt. Its history spans more than seventy years and its contribution to the cultural life and the visual arts in particular, is quite remarkable. Fathy complained that lecturers taught the students only academic themes such as 'The house of the Arts'. Themes such as a rural village were regarded as impossible and students were taught to copy the ready-made solutions from the records of the Ecole des Beaux Arts of Paris. Fathy recalled "When I was nominated head of the composition classes (1953-1957), the first thing I did was to throw away the Annals from the library".[50] Fathy was keen to give students ample opportunity to study and understand the ideals and methods of traditional architecture. Fathy's student, Ahmed Abdou, formerly Head of the Architectural Department, School of Fine Arts, Cairo, argues that Fathy had both credibility as a progressive architect for the students as well as a gift for diplomatic administration with many of the academic architects. To all of this, Abdou explains, Fathy brought a warm, witty personality, which eased the solution to all problems and built an excellent staff around him. The

48 Beau Yarbrough, July Places: A Thing of Love. *Egypt Today*, v.16, no. 7, July 1995, pp. 43-44.
49 Mildred F. Schmertz, Conserving a Rich Architectural Heritage. *Architectural Record*, September 1983, p. 81.
50 Petruccioli, *Spazio e Societa*, no.17, March 1982, p. 49. For Fathy the Annals were the historical records of the ideals and the academic method of teaching of the Ecole des Beaux Arts.

students, who were inspired by Fathy's ideas and way of teaching, mounted a serious challenge to the academic Beaux-Arts tradition of teaching.[51]

The cooperative building system was an important theme which occupied Fathy's thinking at the time. He argued that this system can only work and be achieved, "if a man's work can be recorded as a loan to society and repaid in the form of a building".[52] He also explained that if houses are to be built in sufficient quantity, they must be built without money. People must work outside the framework of money, factories and contractors. A striking proof of the practicability of this system can be seen in the Nubian villages and the villages around Aswan. All their houses were erected out of mud brick, with the voluntary cooperation of the neighbourhood. Although Fathy had not applied his concept of the cooperative building system in New Gourna, he was always looking for "a chance to try out the system of voluntary cooperation in some large building project".[53]

An opportunity came in 1954 when a fire burned down a large part of Mit El-Nasara village. Two hundred families were homeless and living in distressed circumstances in tents. The government wanted to rehouse them by offering each family L.E. 200. Fathy was invited by the Minister of Social Affairs to act as a consultant on the committee that was appointed to provide the solution for the new houses.[54] Fathy believed that the money was not enough, therefore, he explained to the villagers that the cooperative system and building with mud were the only ways to get a large and beautiful house. The villagers agreed and were enthusiastic about the idea. "They were very miserable in their tents and, unlike the Gournis, had nothing to lose by accepting our scheme". Unfortunately, like the obstacles of New Gourna village, the Ministry of Rural and Municipal Affairs was not sympathetic towards Fathy's cooperative system. The ministry gave the job to its own architects, who built concrete houses at much higher cost. Fathy believed that the villagers' encouraging response to his idea indicated "the

51 Author's interview with Dr Ahmed Abdou, Fathy's student at the time and formerly head of the Architectural Department, School of Fine Arts, Cairo, 2000.
52 Fathy, 1973, p. 123.
53 Ibid., pp. 129-130.
54 Ibid., p. 130.

fairly optimistic conclusion that cooperative building would work in most cases of village resettlement in Egypt".[55]

In the 1950s Fathy experienced a series of professional misfortunes. Two of the most striking events were his involvement in an architectural competition to design standardised peasant housing and building the school at Fares. Fathy believed that competitions are a useful gauge of the true outlook of a period, because they give evidence of a wide variety of different responses to the same constraints. However, the Ministry of Social Affairs used the competition to get the cheapest, adequate peasant house. The requirement was to present two different designs and Fathy won both categories. Fathy's submission was for a mud-brick house with the cost of L.E. 250.[56] The Ministry approved Fathy's suggestion of erecting one of his designs as an experiment on a piece of land owned by the ministry in Marg, near Cairo,[57] Although Fathy finished the working drawings and estimates of cost within a week, the Housing Department never built the model house. Fathy transferred the allocated money to the Building Research Centre, which agreed to undertake the job. To be sure of the low cost of Fathy's prototype, the centre also built another house made of pre-stressed concrete with the cost of L.E. 1000. Fathy placed great hope in the result of this experiment, but nothing came of it.[58]

In 1957 Fathy got a promising opportunity to develop his regional approach when he was commissioned by the Ministry of Education to build a prototype primary school at Fares, a town between Luxor and Aswan (ill. 81). It was intended to serve approximately 700 pupils, both boys and girls.[59] The Fares School consists of ten classrooms, a large library, a large multipurpose room, an open-air stage for theatricals, a crafts room, administrative offices, two teachers' apartments, toilets and a mosque (ills. 82-83).[60]

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55 Ibid., pp. 130-132.
56 Ibid., p. 184.
57 Fathy, Building a rural prototype house, a Letter Submitted to the Ministry of Social Affairs, 4 October, 1954. Ms., FAAUC. (in Arabic)
58 Fathy, 1973, p. 184.
59 Richards, Serageldin and Rastorfer, 1985, p. 163.
60 Fathy, 1973, p. 126.

In this project Fathy applied a scheme of in-service-training in which the community allowed its masons to spend their time educating trainees, who in turn can pay for their training by working for the community at a lower rate than the normal. This system was applied successfully in New Gourna. Fathy argued that even if the peasants really produce ugly buildings, it would be the duty of the architects to guide them toward an appreciation of beauty, not by criticising their intuitive taste but by showing them what good architecture should be. Fathy believed that "peasants do like good architecture when they see it, and with a little encouragement can make the most perceptive criticism of bad architecture". This appreciation of beauty was evidenced when Fathy built the school of Fares. At the beginning the villagers refused to build with mud bricks in favour of concrete. But when the school was finished the mayor of Fares told Fathy that the entire village was proud of it.[61]

After the completion of the school, the Minister of Education was impressed by its buildings. Therefore, he decided to build another two experimental schools in mud brick in Edfu, Upper Egypt, following the same layout as the school at Fares. But this time Edfu school was built without the architect's involvement.[62] Although both schools are still in operation and have proved their functional and environmental applicability, no other schools following this prototype were built. The Fares School is still in a good condition but the Edfu model is not well maintained and is near collapse.[63]

Fathy hoped that the success of the School of Fares would confirm the soundness of his mud-brick method. Unfortunately, a deliberate misrepresentation of the cost of the school by the official of the School Buildings Department to the Ministry of Education provoked active opposition among important people there. The experience added to Fathy's growing disillusionment.

> As it happened, I had recently had an adventure with two thieves who had broken into my house and stabbed me, yet it is no exaggeration to

61 Ibid., p. 36. According to Richards, the architecture of the Fares School has become the focus of community pride. The teachers appreciated the facilities and recommended both its aesthetic and thermal performance. They also have found it an excellent environment for teaching the children. Richards, 1985, p. 163.

62 Ibid., p. 189.

63 Steele, 1997, p. 194.

> say that I felt safer with these thieves than with officials who could lie to prevent a benefit from reaching the peasants.[64]

The school at Fares and Edfu as well as his involvement in a prototype for temporary housing for the Arab refugee of Gazza in Palestine in 1957, as part of a United Nations team, marked the end of an important chapter in the architect's career. Although it was a period in which Fathy was able to frame his ideas and confirm the practicability of his buildings, he decided to leave Egypt for number of reasons. Among them were the rejection of his designs for Mit El-Nasara village, the suspension of his model-house for the Building Research Centre and the misrepresentation of the cost of the school at Fares. In addition, Fathy's frustration with officialdom, the great deal of resistance and opposition to his approach, the changing political climate of the time and probably his links to the Royal family showed him that there was no place for him in Egypt. His spirit was broken; his native city had ignored, repressed and ultimately driven him to leave Egypt for Athens.

64 Fathy, 1973, p. 184.

CHAPTER THREE

SELF-EXILE IN GREECE
(1957 -1962)

In 1957 Fathy left Egypt for five years, going to Greece when Constantinos A. Doxiadis asked him to join his organisation in Athens. Although Fathy was recognised as a proponent of nationalistic attitudes, he left Egypt at the time when it had just achieved its independence and when the British occupation had ended. Fathy justified his move to Greece as an opportunity to achieve more professional freedom elsewhere. Frustrated in his efforts to build in Egypt, he believed that it was more influential to build than to teach and that a building anywhere in the world, "would speak louder than lectures; and that if some completed project attracted international attention, it would eventually have an effect on Egypt".[1]

Constantinos A. Doxiadis (1913-1975) was president and chairman of Doxiadis Association International (1951), chairman of the Athens Technological Organisation (1959) and president of the Athens Centre of Ekistics (1963). He also was consultant on Development and Ekistics, with head-quarters in Athens and offices in thirty-six countries. He was responsible for planning and designing a great number of settlements and other large scale development projects, including urban renewal, housing, development of new cities, industrial settlements, commerce and tourism and communication and transportation. Doxiadis lectured extensively at universities in Europe and the United States. He also participated in numerous international conferences on urban problems and housing.[2]

The concept of '*ekistics*' has been defined by Doxiadis as "the science of human settlements". This term was coined by Doxiadis from the Greek words "*oikos*" (home) and "*oikõ*" (settling down), in his lectures of 1942 at the Athens Technical University. Ekistics regards the human settlement as a living organism ruled by its own laws.

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1 Fathy, 1973, pp. 184-185.
2 J. Tyrwhitt, C.A. Doxiadis 1913-1975: Pursuit of an Attainable Ideal. *Ekistics*, v. 41, no. 247, June 1976, pp. 310-313.

Doxiadis believed that an interdisciplinary approach was necessary to study the evolution of human settlements from the most primitive phase to megalopolis and *Ecumenopolis* (city of the future).[3]

Doxiadis argued that houses should be built by the people because it is "the art of the people, their own expression of their own way of life" and that the role of the government should be limited to the provision of a general plan and program.[4] Like Doxiadis, Fathy also believed that governments should change their attitudes toward housing and be aware of the fact that "a house is the visible symbol of a family's identity, the most important material possession a man can ever have".[5] Both men shared the same beliefs, which obviously strengthened the relationship between them.

During Fathy's stay in Athens, he was given a residence in Lycabettus hill at 2 Leukianou Street near the Doxiadis office. Apparently Fathy admired this house because it was a small traditional courtyard house, typical of houses built in the nineteenth century in Athens. As remembered by Fathy's colleagues of that time, it was a single-story, whitewashed house decorated by ironwork grills on the windows and a pitched, red-tile roof.[6]

Fathy started his work in Doxiadis Associates' first office in 10 Venizelou Street, Athens. He was first appointed to work in the New Cities project in Iraq. The Iraq Housing Programme was one of the major commissions for Doxiadis Associates from the Ministry of Development, where they could test their theories of human settlements. Internal memos indicate that Fathy was specifically involved in the design of the Regional Plan for the Development of Greater Mussayib, a rural farming village (1956-1958) (ills. 84-85).[7]

In the preliminary studies for this project Fathy proposed a training course for masonry

3 C. A. Doxiadis and J. G. Papaioannou, *Ecumenopolis: The Inevitable City of the Future*. Athens, 1974, p. 436
4 Steele, 1997, p. 111.
5 Fathy, 1973, p. 33.
6 Steele, 1997, p. 111.
7 Fathy, A Proposed Training Course for Masonry Work in Rural Areas. Doxiadis Associates, 26 September 1957. Ms, FAAUC, no. 34, p. 1.

work in rural areas. The course was supposed to be run for trainees who would help in the construction of the village. Like New Gourna village, Fathy also surveyed some traditional buildings in order to define their architectural elements and methods of construction. In the south and middle of Iraq Fathy found that earth bricks, burnt or stabilised, were the main building material for both walls and vaulted roofs. Another example was the palace of Al-Okhaider with its suggestive brick arches, vaults and domes. Fathy argued that these traditional architectural elements could be revived in a simpler form by including their method of construction in the training program. He also suggested that if there were no masons in Iraq who could master such traditional techniques, some specialised masons from Egypt could be brought to help in the training program. Fathy's main aim was to encourage people to use local materials as well as perfecting building crafts and techniques.[8]

The problem of thermal comfort in housing was an essential factor in the design process. Fathy prepared a report, which included some sketch drawings of architectural solutions. These took into consideration both the sun and wind as factors in defining the arrangement of openings and overhangs. The study included important ideas for the whole building program and the research staff decided that "these ideas... [should] be incorporated in all our future architectural design in those areas where heat is a primary problem".[9] In the margin of Fathy's drawing there were sketches of Iraqi vernacular houses with their distinctive system of trapping cool night air in the stone basement for re-circulation during the day. This indicated that Fathy was concerned to incorporate this vernacular system of ventilation in the new design in order to preserve traditional values.[10] Fathy also suggested his idea for an artificial lake to be included in the Mussayib village. Ironically, his dream of the artificial lake, which has never been realised in Egypt, was appreciated by the government of Iraq which adopted the idea and decided that every village in Iraq should have one.[11]

Doxiadis commented on Fathy's plan for the village of Greater Mussayib, in an internal

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8 Ibid.
9 Fathy, Applications of Ideas on Thermal Comfort. Doxiadis Associates, 2 May 1958. Ms., FAAUC, no. 10, p. 1.
10 Steele, 1997, p. 194.
11 Fathy, 1973, pp. 109-110.

memo, dated July 21, 1958. For ten days Doxiadis studied Fathy's plans of the Mussayib villages, their houses and their buildings. However, he classified his remarks on the work already done by Fathy into three basic categories. The first category referred to the necessity of keeping a system of modules in order to achieve generalisation. Doxiadis recommended the use of the 3.6 modulus system, which was used in Fathy's plans and had proved its practicability in the design of stabilised earth buildings or houses. The second remark referred to the importance of having types of villages which could be repeated many times rather than individually designing each village and its corresponding buildings, including houses and other facilities as Fathy proposed. However, Doxiadis' intention was not to repeat the same type of village as a unit everywhere, but that the unit should be the single house and building. Therefore, Doxiadis asked to split Fathy's systems of buildings into types of buildings, which could be assembled in several ways by using the Grid system.[12]

His third remark referred to the separation between the movement of pedestrians and the movement of cars. Doxiadis recommended the implementation of these ideas "in order to reach solutions which are now easy because the basic elements have been studied and are the right ones".[13] However, Doxiadis sought a combination between his views and Fathy's ideas in order to achieve a national conception in the spirit of Ekistics. "I therefore beg Professor Fathy to look into the types of buildings from this angle... I beg Professor Fathy to look into the work for standardisation of buildings which we have been doing lately with O-GAB".[14]

Although Doxiadis believed that Fathy's work was "a very important contribution to the research and design work", he regarded the concept of Fathy's design as inadequate to provide solutions to be carried out in large numbers. In addition, Doxiadis believed that Fathy's general systems of ideas would also ignore the essential details of a master's work. He explained that "whilst our work begins from the national conception and goes down to the details, Professor Fathy has worked from the very smallest details upwards,

12 Fathy, Plans for Village in Mussayib, Doxiadis Associates, 21 July 1958. Ms., FAAUC, no. 32, p. 1. For more analysis of Fathy's planning concept, see Chapter 6.
13 Ibid., p. 2.
14 Ibid., pp. 1-2.

building his village".[15] From this perspective, we can recognise that Fathy's design represented an individualised project, which did not conform to Doxiadis's planning approach. Yet Doxiadis's remarks on Fathy's design revealed that he regarded a village as a combination of preconceived building types, while Fathy believed that the subtlety of planning a village is to maintain unity between part and whole, between idea and constructional means as well as to symbolise them.

The Iraq Housing Programme had also included the design of high-rise blocks, which were intended to house officials, non-farming families and artisans. In his design Fathy followed the International Style in both plan and elevation. The remaining drawings, dated 17 March 1959, included a master plan for the new city, a detailed design of one of its quarters, elevations, plans of the blocks and plans of the units (ills. 86-87). The general layout consisted of repetitive, four and eight-storey high-rise residential blocks of concrete frame construction. While the four-storey block consisted of duplex three-bedroom flats, the eight-storey block contained one-storey flats and duplex two-bedroom, three-bedroom or four-bedroom flats. Each neighbourhood included housing, primary school, kindergarten, shops and café-restaurant. While a network of walkways and green spaces linked the housing blocks together, the whole quarter was connected to the larger urban design with vehicular streets and divided highways.[16] Fathy's colleague, Myrto Antonopoulou-Bogdanou, confirmed that some of these high-rise blocks were built in Sulimania and Mosul cities to house people before the Iraq Revolution in 1959. Afterwards, their inhabitants left these multi-storey blocks to live in their original *sarifas* (mud houses). This pattern of houses contradicted all Fathy's previous design philosophy and ideals and was totally out of character.[17]

Soon afterwards, Fathy was one of the team of experts who participated in the thorough early discussion on the project for the 'City of the Future' then underway (1961-1962). The idea of the 'City of the Future' project was born in the Athens Centre of Ekistics in 1960. The project evolved in new offices at 26 Fokylidou Street in Athens and was funded by twenty-five percent of the income of Doxiadis's architectural and planning

15 Ibid., p. 1.
16 General layout of the proposed design of the Iraq Housing Program, 17 March 1959, FAAUC.
17 Steele, 1997, p. 114.

projects. The concept of the project was to help the understanding of human settlements and to attempt to deal with the urgent problems of cities.[18] The aim of the project, as described by C.A. Doxiadis and J.G. Papaioannou, was

> to face the future of human settlements in a realistic way... by predicting the most probable road that will be taken by population, energy, incomes and technology at their highest growth levels and the corresponding formation of human settlements merging into the City of the Future. In this way, we can prepare ourselves to deal with the most difficult situation that might occur by building Ecumenopolis in the proper way and with a proper ecological balance for the sake of humanity, and if in fact growth does not reach this high level, then we are going to be even more successful in dealing with Ecumenopolis, our inevitable City of the Future".[19]

They argued that the establishment of the City of the Future would create a new state of balance between human, nature, and human settlements. They also believed that the quality of life would probably be much better then than it was at present as well as being better than at any previous time in the history of humankind.[20]

The main body of knowledge of the City of the Future project was the result of the immense effort of many experts. Foremost among these, was Myrto Antonopoulou-Bogdanou, a Greek architect and planner, who was the project manager in 1964 and developed several aspects of the theory of the City of the Future. The team also included Dr R.L. Meier, an American environmental planner, Professor J. Tyrwhitt, a British architect, Professor J. Matos Mar, a Peruvian anthropologist, Professor M. Gomez Mayorga, a Mexican architect and Professor G. Gutenschwager, an American geographer. Other contributors were Dr Arnold Toynbee, a British historian, who contributed his historical perspective of the future of human settlements, Panagis Psomopoulos, a Greek architect and planner, with whom Fathy went in a mission to Syria in the late 1959 to negotiate projects in Homs, Hama and Selemiyah; Marion Carr, a British anthropologist for whom Fathy designed a house in Greece in 1962 and Hassan Fathy, who surveyed many cities, mainly in Africa.[21]

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18 Doxiadis and Papaioannou, 1974, p. xiii.
19 Ibid., p. xv.
20 Ibid., p. 394.
21 Ibid., p. ix.

In 1960 Fathy was assigned to visit various parts of Africa and the Middle East in order to prepare reports as part of the study required to develop the City of the Future project. Before beginning his task, Fathy submitted a report in October 1960, regarding "Exchange of Views on the Research Project". He argued that all the research staff should be acquainted with each others' views and ideas about the project before undertaking their research. "I would like to see us proceed with great caution, even vagueness, in the beginning, but to end up by being as definite and precise as we can".[22]

Fathy argued that the problem of the City of the Future was the need to deal with change occurring more rapidly in some areas of the city's growth than others. For example, population tends to grow faster than the ability of the city's infrastructure to keep up with it. He also explained that in Africa and the Middle East cities were changing very rapidly, especially as a result of the larger process of urbanisation. This produced correspondingly greater changes in human relations than in the cities of Europe and North America, where urbanisation was more advanced. Fathy suggested not simply planning for an orderly growth of housing and communities, but for the harmonious growth of the urban environment as a whole, which could be achieved at successive stages during the growth of the city. Fathy believed that

> the rapid demographic, economic, political, and social change that is taking place in most of the countries of Africa and the Middle East will form the determining framework into which our town planning pattern must be filled.[23]

In the course of preparing the study of the City of the Future, Fathy prepared a detailed outline of the research project, which included some important points to be considered. Among these points was plurality and unity in the city, which concerned the sense of urban structure, breaking up the city into a hierarchy of communities and focusing on the individual as the starting point.[24] In his report "Plurality and Unity in the City", Fathy argued that a city may look as if it is no more than a group of districts arranged next to one another, but there is a structural unity underlying this arrangement. He

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22 Fathy, The City of the Future: Exchange of Views on the Research Project. Internal Report to the Athens Centre of Ekistics, 12 October 1960. Ms., FAAUC, no. 37, p. 1.

23 Ibid.

24 Fathy, The City of the Future: Outline of the Study of the Research Design. Internal Report to the Athens Centre of Ekistics, 28 November 1960. Ms., FAAUC, no. 38, p. 1.

believed that by examining a city physically, visually, economically and socially, its unifying structure could be expressed and understood.[25] Another essential point was the sense of quality emerging from quantitative change including morphological, social, economic and cultural change.[26]

Fathy's tour to African countries was designed to visit Cairo, some cities of West and North Africa and one or two cities in central Africa, including Tripoli, Khartoum, Lagos, Accra and Abidjan. He intended to begin with Cairo because the nature of its urban problems related to Dynopolis. His visit also coincided with a seminar in Cairo, sponsored by the Congress for Cultural Freedom and the Egyptian Society of Engineers on "The New Metropolis in the Arab World". This seminar took place in Cairo from 17th to 22nd December 1960, and Fathy presented a paper on "Planning and Building in the Arab Tradition".[27]

Doxiadis also attended this seminar and Fathy introduced him to the scholars in Egypt. The seminar was a reflection of a scientific movement in Egypt promoting the rebuilding of traditional villages and the return to traditional values. This coincided with Doxiadis's initiative to establish an institution for village studies. Therefore, Fathy seized the opportunity and wrote letters to the Ministry of Scientific Research and other organisations. He explained the curricula of the Athens Technical Institute and suggested the establishment of a similar institution for village studies in Egypt with collaboration with Doxiadis's association. Although Fathy explained his ideas to many ministries and organisations, his efforts came to nothing.[28]

In April 1961 Fathy submitted a preliminary report on the towns he visited in Africa. Because of political events and complicated diplomatic relations between African countries, Fathy had to modify his original itinerary; and his trips to Morocco and Tunisia were cancelled. Doxiadis suggested that Fathy should visit East Africa, where

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25 Fathy, The City of the Future: Plurality and Unity in the City. Internal Report to the Athens Centre of Ekistics, 29 November 1960. Ms., FAAUC, no. 39, p. 1.

26 Ms., FAAUC, no. 38, p. 1

27 Fathy, The City of the Future: Report on Towns Visited in North and West Africa. Internal Report to the Athens Centre of Ekistics, 20 April 1961. Ms., FAAUC, no. 41, p. 1. In Africa Fathy visited Cairo, Khartoum, Kano, Lagos, Accra, Abidjan, Bouaké, Ouagadougou, Bamako, Dakar, Conakry, Monrovia, Lomé, Cotonou, Porto Novo, Douala, Yaoundé and Tripoli.

28 Abdelbaki Ibrahim, *The Arab Architects: Hassan Fathy*. Cairo, 1987, p. 32.

he could study the Asiatic influences on its towns to make comparisons with the European influences in West Africa. Unfortunately, Fathy also had to cancel this visit because of the lack of air communications over Central Africa.[29]

In most African cities, Fathy was not able to base his research upon statistical data, because it was virtually nonexistent. The only available data were outdated statistical tables of population growth, which Fathy regarded as useless for any prediction of future planning. However, Fathy's methodology in his case-studies was based on an examination of the outside character of each city to find out what its appearance could tell him. This was supplemented by conversations with planning authorities in order to discuss what was intended for the city in the future. Fathy also examined all possible publications to get information to supplement his visual impressions.[30]

In his reports Fathy explained the concept of optimum and minimal configuration and its importance to the problems of town planning. The principle of minimal configuration is that which determines the shape and size of natural forms like crystals and living organisms. The shape and size of their bodies could be seen as a direct result of the most economical balance of the natural forces acting on them.[31] The principle of minimal configuration can, however, explain the problems of town planning. If one regards every urban feature such as street, square, block, house, or even every brick, together with the density and orientation, as a direct result of forces acting upon them, then one would be able to explain the shape and size of towns. In town planning, where planners and architects deal with many human factors and where many forces are not the inevitable product of natural forces but the result of human decisions, the idea of minimal configuration should be replaced by that of the optimum configuration.[32]

The optimum configuration is the result of assessing the value of all the natural and physical pressures or forces that will operate in the city. The many factors that determine the optimum configuration of a street or a neighbourhood, such as the

29 Ms., FAAUC, no. 41, p. 3.
30 Fathy, The City of the Future: Africa, Case Studies of Cities Visited, Some Conclusion. Internal Report to the Athens Centre of Ekistics, 2 July 1961. Ms., FAAUC, no. 42, p. 1.
31 Ms., FAAUC, no. 41, p. 27.
32 Ibid., p. 28.

aesthetic, the climatic, hygienic, etc., may often be found to conflict with one another. Because the optimum configuration for any one factor may be quite different from that for another, the planner cannot consider all factors at once. Fathy argued that the only way to overcome it is to take the separate factors one by one and to determine the optimum configuration of the neighbourhood with regard to each.[33] One may then resort again to drawing plans, where a plan of the optimum economic configuration, for example, can be superimposed on that of the optimum hygienic configuration. This will enable planners to see at once, graphically represented, the whole of the problem.[34] Fathy also believed that if planners consciously emulate the principles of the unconscious processes of minimal configuration that formed the shape of crystals or any living organism, then their creations will become the graphical representation in space of the forces that acted upon them. In addition, the city will become a living, not only lived-in, symbol of the intimate union between form and the spirit that has created it.[35]

Fathy also emphasised the importance of the idea of the sector, which had an affinity with his small neighbourhood in New Gourna village. The sector is the basic unit for an urban settlement. It was developed by Doxiadis in his plan of *Dynapolis* and applied to Islamabad.[36] Fathy believed that

> Dynapolis provides exactly what nature does for the human body - a simultaneous growth of skeleton and flesh, of roads, services and 'centre' with housing. And a plan based on this principle can even guide speculative builders into the right place, where their houses will become part of the whole plan.[37]

However, for Fathy the size and shape of the sector in Islamabad city makes an invaluable basis of comparison for African cities. He argued that if the plan of the sector was adjusted for local conditions, it might be drawn to the same scale as the plan of the city under investigation and superimposed on this plan. He explained that this would show the state of the city and whether it was close to the required configuration. Fathy

33 Ibid., p. 29.
34 Ibid., p. 30.
35 Ibid., p. 28.
36 Ibid., p. 30.
37 Ibid., pp. 30-31.

believed that "such a method will help considerably towards overcoming the lack of data which so hampers work on African towns".[38]

From all Fathy's observations on the African cities, one essential conclusion stands out.

> African cities are different in kind from all other cities. Whereas all other cities display in their social, economic and political hierarchies a continuous gradation and a great deal of communal mingling and use of common services and facilities, in almost no African cities is this true.[39]

Fathy believed that the reason for this was that a European or Middle Eastern city is like a chemical composition in which the elements are closely bound together, but an African city is not even a mixture, it is like number of dissimilar metals clamped together. In this case, the elements are the different ranks in the social hierarchy which are separated by colour, language, wealth and tribal connections. However, they do not meet nor mix at all except for the exchange of services.[40]

In the conclusion of his reports Fathy referred to an obvious phenomenon of agglomeration. There was always a tendency towards larger settlement units, a natural movement from family to village to town. Thus, for Fathy, this phenomenon was necessary economically, if the standard of the African life was to improve. He criticised the European presence in Africa and believed that "when a European town is planted in the bush, the natural hierarchy of settlements is upset". Fathy explained that there was no interlocking economy between the small African units and the larger European ones, which always draw off labour from the surrounding country. Therefore, the labourers' work in a European town was, in fact, not connected with their own economic life because they lived in squatters' settlements outside the real town. Fathy believed that such an alien town "does not have a genuine relationship with the countryside, it is not part of the logical hierarchy of communities, and the African workers in it lose touch with their own world without being assimilated into the urban world".[41]

The relationship between a small African village and the larger European town mirrored

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38 Ibid.
39 Ibid., p. 5.
40 Ibid.
41 Ms., FAAUC, no. 42, p. 2.

that of the coloniser to the colonised on a country-to-country scale. While the colonial authority, which was to be a system of political repression, was using its power to govern the colonised country as well as to keep the people inmates of their own villages, the European model-town was built to represent the genius of the coloniser nation. Similar to the distinction of power between the coloniser and the colonised, the model-town introduced a distinction between the materiality of the buildings and the set of directions required to live in them in order to exhibit the backwardness of the colonised. Such a distinction neither existed nor was known to the colonised, whose villages were simply built as an expression of their own traditional and cultural code.

Fathy documented the gulf that existed between the European and African quarters, creating a gap in housing standards, income, educational facilities, habits and way of life. This gap was strongly felt after many African countries become independent and were confronting the problems of running their own affairs. This was evident when the President of the Ivory Coast, Houphouet-Boigny, declared that in "the Ivory Coast we number 20 lawyers, ten doctors and three engineers. Do you think we can get out of this mess without France?" This comment attracted Fathy's sympathetic attention. Although he recognised the truth of Houphouet-Boigny's statement, Fathy argued that he should have asked himself, why there were very few scientists in his country. Fathy suggested that what brought the Ivory Coast to this state was the colonial policies of France. Fathy believed that "European assistance is valuable to an African country only if it is part of a plan that envisages doing without such assistance eventually".[42]

There is no doubt that Fathy's findings were of great importance in defining the role that *Ekistics* could play in the future of West Africa. His final conclusion was that any two towns in Africa, one developed by its indigenous inhabitants and the other one by Europeans, were definitely incomparable. Although, both towns may appear to be at the same stage of growth, it is impossible to infer this from their respective development curves or even to predict their future progress. Fathy believed that this lack of data would affect the future development of the total *Ekistic* pattern and give an incomplete picture of today's pattern.[43]

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42 Ibid., p. 3.
43 Ibid., p. 2.

The concept of "time" was another important issue that Fathy included among his recommendations to the City of the Future project. For Fathy, time means simply "the perception of change in one place". He argued that "to talk about the future means to understand time" and it is important to understand that "time is not such a simple or obvious phenomenon, but that one has to exercise considerable ingenuity to fit it into a coherent picture of the universe". In bringing his ideas on time to the study of the City of the Future, Fathy recommended that researchers should be careful to re-examine the everyday notions of direction and division of time, in order to confirm that they are appropriate to the study. Therefore, Fathy explained that

> when we discuss the development of a city, we should try to see it according to its own scale of time. But the time-scale by which a town's life is measured should be based on the stages of its development, just as an insect's life is measured by its successive metamorphoses. The advantage of such a time-scale is that it will enable different cities to be realistically compared.[44]

Doxiadis believed that Fathy's observations, survey and reports about Africa for the City of the Future project have "contributed several interesting ideas".[45] In fact, these reports were not only significant to the overall City of the Future project but also raised several important issues, including the role of the dwelling within the urban settlement and the concept of contemporaneity. In his report, "The Dwelling within the Urban Settlement", Fathy argued that in any human settlement, the basic unit is the individual family dwelling. "It is the objective and tangible projection of the family, and the most important thing in a family's or an individual's life". Fathy explained that there is an analogy in function between a family and a house; while the family is the interpreter between the individual and society, the house is the buffer between the individual and the world of things. Unlike Le Corbusier, Fathy believed that a "house is not a machine for living in; it is a private world, dependable, unchanging, a constant kindly refuge in the cultural avalanche that we are pleased to call civilization". However Fathy believed that the only way to plan for a large population is to break it up into smaller

44 Fathy, The City of the Future: Contribution to the Final Report - General Introduction. Internal Report to the Athens Centre of Ekistics, 17 July 1961. Ms., FAAUC, no. 43, pp. 3-5.

45 Doxiadis and Papaioannou, 1974, p. ix.

communities in an organic way as well as handling people as individuals and dwellings as separate entities.[46]

"Contemporaneity" was also one of Fathy's most important reports to the City of the Future project, where he articulated his understanding of the term and released it from its association with certain clichés. Fathy explained that he was not condemning contemporaneity, but defending it against its acquired inappropriate name. He regarded all great architecture as being not only contemporary with its time and suitable to its place in space, time and human society, but also eternal. For Fathy architecture "without being eternal – i.e. in harmony with the cosmos and the evolution of life – no architecture can be called contemporary". Fathy explained that because architecture deals with both man and buildings, contemporary architecture should be more than a combination of visual and engineering aspects. It should involve all the other disciplines that have an effect on architecture and human settlements, such as anthropology, sociology, psychology, physiology, economics, physics and mechanics. Fathy believed that if

> the work of architecture falls short in any of these respects, and fails to make the best use of the discipline in question, it will be anachronistic – not exploiting to the maximum man's present knowledge for the advancement of humanity along its predestined path.[47]

Fathy also argued that contemporaneity was linked with the notion of change and to be contemporary means to be relevant to the present, where the reality coincides with the ideal. This attitude can be traced in the design of two unbuilt projects which Fathy was involved with during his work on the project of the City of the Future. In 1960, Fathy prepared a master plan and building design studies for a university for the Algerian Ministry of Education to be sited in central Algeria and a large mosque designed for the government of Pakistan.[48] The drawings showed Fathy's efforts to comply with the reality of his time by employing modern forms. The plan of the mosque included a courtyard surrounded by spaces covered by a triangular trussed roof in a form of

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46 Fathy, The City of the Future: The Dwelling within the Urban Settlement. Internal Report to the Athens Centre of Ekistics, 18 August 1961. Ms., FAAUC, no. 46, p. 1.

47 Fathy, The City of the Future: Contemporaneity. Internal Report to the Athens Centre of Ekistics, 1 August 1961. Ms., FAAUC, no. 44, pp. 5, 7.

48 Richards, Serageldin and Rastorfer, 1985, p. 163.

Fathy's invention. The mosque was also characterised by two pointed minarets and a geodesic dome covering the main prayer area (ill. 88). Fathy's use of the geodesic dome was an innovative solution and one which he employed in subsequent projects.[49] Apparently, Fathy was influenced at the time by the geodesic domes of Richard Buckminster Fuller (1895-1983), who participated in conferences related to the City of the Future. In the early 1930s Fuller devoted much effort and studies to the art of structures, which led him to produce his geodesic dome. This kind of dome, based upon octahedrons or tetrahedrons, can be made of metal, plastic, or even cardboard. Unlike Fathy, Fuller's use of the geodesic form was not based on traditional or architectural reasons but on its natural efficiency in providing the greatest space enclosed in relation to the surface area of the enclosing form. The assembly techniques of Fuller's geodesic domes are, in a sense, the descendants of those employed by Sir Joseph Paxton in the Crystal Palace, London, 1851.[50]

The triangular truss roof of the Pakistan mosque which Fathy devised for this project was inspired, in part, by "Doxiadis's Pakistan Diary in which the basic elements and characteristics of the landscape and climate are vividly pictured". Doxiadis's analysis included ideas suitable for any similar hot-humid zones. It provided solutions to ventilation and air movement in the interior as well as the use of local materials and methods of construction. Fathy argued that while the flat roof is expensive for low-cost houses, the gabled roof does not satisfy the needs of ventilation and air movement.[51]

Fathy was also influenced by Pier Luigi Nervi (1891-1979), who was professor of structural engineering in the Faculty of Architecture, Rome University.[52] Nervi's theory of geometrical forms was to obtain "strength through form" in buildings. The great hall of the Exhibition Building in Turin (1948-1949) is one of Nervi's masterpieces, which consisted of a single roof structure made of prefabricated triangular units.[53] Fathy followed Nervi's structural principles and carried out a successful experiment with a

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49 A Drawing includes plan and elevation of the mosque, FAAUC.
50 V. M. Lampugnani, *Encyclopaedia of 20th Century Architecture*. New York, 1989, p. 112.
51 Fathy, A Roof for Hot-Humid Zones. Doxiadis Associates, 21 December 1960. Ms., FAAUC, no. 87, p.1.
52 Fathy, Corrugated Roof. Report submitted to the Ministry of Foreign Affairs, 17 April 1961. Ms., FAAUC, no. 66. (in Arabic)
53 Lampugnani, 1989, pp. 237-238.

corrugated-form roof (ill. 89). His aim was to achieve a strong structure by means of the geometrical form rather than by increasing the section of the materials. This roof was to be of triangular trussed frames, half-made of ordinary reeds and half of wooden lattice lined with two layers of chicken-wire. A lower layer of one-centimetre mesh was to hold the cement while on the upper side four-centimetre mesh was used. This kind of roof achieved efficiency through the low cost of the materials, the rigidity of its construction and the effectiveness of the ventilation it provided. It can be used in rural domestic architecture as well as in wide-span roofs, and was thus highly adaptable.[54]

Fathy enjoyed the exciting intellectual and social environment of the Ekistics group and lectured on climate and architecture at the Athens Technical Institute. He also participated in the early 1960s in the preparation of the curriculum of a postgraduate School of Ekistics, which included thirty Pakistani students from Islamabad. Fathy's contacts were not limited to his colleagues in the association, but also extended to what Panagis Psomopoulos has described as the "musical milieu". Because of his love of playing the violin, Fathy established friendships with several people. Steele claimed that Fathy had established a friendship with the composer Iannis Xenakis (1922-2000), who studied engineering at the Athens Polytechnic. Steele also believed that because Xenakis was working in Paris at the time and had the opportunity to work with Le Corbusier, his influence, along with that of Doxiadis, may explain Fathy's move towards the Modernist camp with the Iraq project.[55] In fact, Steele's claim needs to be challenged, as the possibility of Xenakis's presence in Athens at that time is questionable. During the post-war turmoil in Greece Xenakis played a part in the Resistance and in 1945 he was captured and condemned to death. But he escaped to Paris in 1947 where he made his home. His death sentence was revoked by the Greeks only in 1974. It is therefore unlikely that he returned to Greece before then.[56]

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54 Ms., FAAUC, no. 87, pp. 1, 4.

55 Steele, 1997, pp. 117-119.

56 Innis Xenakis worked in the studio of Le Corbusier, where he was responsible for the geometries that dominated the architectural practice during the 1950s. He shared in projects such as the convent of La Tourette and the Philips Pavilion at the 1958 Brussels Exposition. For the latter Xenakis composed Concerto PH, whose sole sound source was amplified burning charcoal. At around the same time he began giving these new geometrical architectural shapes a musical form, using individual glissandos in a large body of string instruments to draw out lines as in a sonic blueprint. Obituary: Iannis Xenakis. *The Times*, 5 February 2001. www.thetimes.co.uk

John Papaioannou recalls a dinner party hosted by Fathy in the open courtyard of his house, which may provide an insight into the reciprocal influences that may have been generated between Fathy and his friends. Among the guests were the historian Arnold Toynbee and his wife, Professor Gomez Mayorga and the composer Iannis Christo, who had an extensive understanding of oriental religions. Christo started an argument about the values of tradition in society, where all the guests shared their own points of view. While Mayorga promoted the Modernist view, both Fathy and Christo supported the traditionalist view. A brilliant argument took place between the two sides and was concluded by the unchallenged victory of the traditionalists.[57]

In Greece, there are no records or drawings to indicate Fathy's involvement in other projects than those designed with Doxiadis and Associates, except for a single house for Marrion Carr in 1962. Carr was a British anthropologist and one of the team of experts whose social studies were valuable to the City of the Future research. She bought a small section from her colleague, Jacqueline Tyrwhitt, in Liodessi, outside Athens, and asked Fathy to design a modest traditional Greek house for her. Fathy prepared designs for two linear variations, where both took advantage of a north-south ridge running through the site and overlooking a picturesque view to the east. The plan consists of a central courtyard, which divides the house into two wings, each on a different level to get full benefit of the slope of the site (ill. 90). The exterior was characterised by its pitched, red-tiled roof and whitewashed walls, a gesture of respect to the traditional construction techniques and materials of Athenian architecture (ill. 91). Unfortunately, neither of Fathy's proposals satisfied Carr's requirements. She believed that the rooms overlooking the east lacked adequate openings, to allow for the appreciation of the visual quality of the location. It is probable that the subtle difference between Fathy and Carr was a cultural issue, where Fathy's design sought more privacy. Instead of asking Fathy for modifications, Carr sold the land back to Tyrwhitt and bought an existing house on the island of Serifos.[58]

No records have yet been found to document Fathy's travels around Greece, but certain places were mentioned in his writing and reports, including the islands of Chios,

57 Steele, 1997, p. 119.
58 Ibid., p. 120.

Mykonos and Santorini in the Cyclades. Fathy was attracted to the building forms of these islands, which have developed according to the social and traditional culture of the people as well as the environment and materials of the region. These factors were similar to those that underpinned his own architectural philosophy.[59]

During this period of self-imposed exile in Athens Fathy also designed several interesting projects for Egypt. These indicate his concern to maintain a close connection with Egypt, until he returned in 1962. Although the influence of the International Style on the Ekistics group appeared in the rounded forms and the exterior glass curtain wall of the flat designed for his brother Ali in 1960 (ill. 92), his other projects showed Fathy's inclination to balance this modernistic view by incorporating features of the medieval Cairo house. While Fathy used the inner courtyard and the *Mālqāf* in the proposed design for the Attia Restaurant in Cairo (1960), he employed a large projecting *māshrābīyyāh* in the Maaruf apartment building in Cairo (1960). Fathy's visit to African countries also extended the circle of his clients internationally. In 1960 he was commissioned by the Ambassador of Nigeria to design a house to be located in Niamey, Nigeria. Because of the intense heat of the region, Fathy employed the principles of the *tākhtābūsh* (covered sitting area between two courtyards) to generate an air flow from a cooler landscaped courtyard to a hotter paved one (ill. 93). The *tākhtābūsh* was employed in many of Fathy's subsequent works.[60]

At this point, it would be valuable to assess Fathy's position at this period of his career in order to understand its effects upon his subsequent attitudes towards both his traditional approach and the other strands of the modern movement. In his work in the Iraq Housing Programme one senses a complexity and ambiguity in the relationship between his early architectural approach and his work at that time. Fathy's adoption of modern architecture principles in this project might be seen as a rejection of all that he had established before, but at some level it could be justified as a temporary shift from his traditional approach to a modern tendency under a compelling demand to conform to Doxiadis' ekistics approach. It is unlikely that Fathy would have suddenly broken with

59 Ibid.

60 Ibid., p. 195. For more detailed discussion of the *tākhtābūsh*, see Chapter 5, pp. 131-133.

the convictions arrived at through his first twenty years of experiments with his traditional approach and diverted to a more modern approach, but he was trying to make connections with the main currents of modern architecture. However, this was not a case of returning to his classical beginnings, but of blending together some of the primary devices of modern architecture with an ancient sensibility.

Fathy's involvement in the studies of the City of the Future project and his intensive investigations of urban planning and housing in African cities also gave him the opportunity to address almost all the technological, social, political, economic and aesthetic changes that were taking place during the late 1950s and the early 1960s. This large-scale project created a greater awareness of methodology and helped Fathy to formulate a new understanding of the construction of the built environment. It also increased his interest in city planning and the definition of the village as the basic social unit. In fact, Fathy's work and research in this project provided a large body of evidence of the limitations of modern architecture in fulfilling human needs as well as affirming Fathy's belief in his traditional approach.

When one considers the nature of Fathy's work in Greece, one sees that his traditional approach did not work well because of the growing interest in modern forms and building techniques and the constraints put forward by Doxiadis's concept of standardisation and building types. Fathy's experiments with innovative applications of new architectural forms derived from a modern system of construction such as that of the Punjab mosque, were a catalyst which confirmed to him the appropriateness and applicability of his traditional forms and building techniques. However, the most striking aspect of this period was Fathy's realisation of the potential of his early conceptual and practical investigation of his traditional approach which would direct his work through the remainder of his long career. Although Fathy's work with Doxiadis might be seen as a springboard for an international career, it nevertheless revealed fundamental differences between their viewpoints. These differences, and the increasing tension between Fathy's ideas and Doxiadis's rationalistic approach, might be regarded

as the probable reason behind his decision to leave the Doxiadis Association and his return to Egypt in 1962.[61]

61 Little is known about Fathy's personal life in Greece. However, Souad, Fathy's niece, confirmed that when Fathy returned from Greece in 1962, he was accompanied by a girl called Tiya, and it is likely that Fathy adopted her. Fathy brought her up until she married and returned to Greece. Souad recalled that Fathy continued to ask about her while she was living in Greece, but he rarely mentioned her within the context of the family in Egypt.

CHAPTER FOUR

LATER LIFE AND CAREER
(1962 -1989)

While still living in Athens and preparing for his return to Egypt in 1962, Fathy "was becoming thoroughly depressed at the thought of having to live among the noisy, crowded streets of modern Cairo". However, when a friend rang him in Athens and told him that a flat in the Aly Labib house was going to be vacant, Fathy decided to take it "at any price!" The Ali Labib house was a Mamluk house built in the 18th century for Prince Mantily, and after the last descendant died, the house passed to Ali Labib, their *waqil* (bailiff) and was registered as a historical monument (ill. 94). Although Fathy admired the house he explained that it no longer represented the classical 18th century Arab house. The northern and western sections of the house were destroyed and rebuilt in a pseudo-Italian Renaissance style.[1]

The three-floor Ali Labib house lies at 4 Darb El-Labbana Street in the old *Qala'a* (Citadel) district and was known as *Beit Al-Fan* (home of the art). The facade of the house included four old *māshrābīyyāhs* and a massive wooden doorway. This door ensured quietness in the interior of the house and shelter from the bright sun. The doorway leads into the forecourt, where several doors lead to various parts of the house including the inner courtyard. There are seven flats; three flats off the outer courtyard and four flats off the inner courtyard. From the inner courtyard, a stone staircase leads to the rooftop flat of Fathy. Just below him the Aga Khan leased another flat.[2]

Fathy's flat consisted of two living rooms off the roof, but he added a bedroom and a bathroom. The living room was characterised by its low, wooden-beamed ceiling, small windows screened by *māshrābīyyāhs*, stone floor covered with colourful rugs and a Moorish-style fireplace built by Fathy. It was simply furnished with divans, two rounded tables, old leather armchairs and very often Fathy's drawing table (ill. 95).

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1 Mia Fouad, The Eye of the Observer inside Hassan Fathi's Home. *Cairo Today*, September 1981, p. 40.
2 Ibid.

From the roof top terrace Fathy had the most wonderful view of the old city of Cairo with its Citadel, minarets and domes.[3] In describing his house and the advantage of the old suburb Fathy said,

> I'm surrounded by five mosques and naturally, thanks be to God, they were not demolished like the rest. Here I am living in a skyscape, not a landscape. Because of the technique that's been invested in them and the delicacy of their structures, the minarets around you make you think, and the air makes you feel, that technology has been subjected 100 percent to artistic expression. Every detail has a meaning. They are not made haphazardly or just by the whim of one individual artist or architect: this architecture is a communal art. So I think it is a great privilege to live here, in this environment, and I thank God that I could find this part of the world to build in.[4]

Not surprisingly, Fathy's belief in the value of tradition was still strong. His primary concern was to develop his mud-brick style and the self-help building approach which he had been experimenting with since the mid 1940s. He was finally able to work with a consistent architectural language on large and small scales, in which delicate domes and vaults were employed as integral balanced forms. The first commission Fathy received after his return from Athens was the New Valley Training Centre in 1962 (ill. 96). The Centre was part of the government's development scheme for the Kharga Oasis, where Fathy was able to test his traditional approach. The project was built in conjunction with a series of new towns and was intended to provide both a basic education and technical training in areas of agriculture, mechanics, nutrition and hygiene. Since its construction, the building has suffered significant damage to the mud-brick walls, vaults and domes, because of the surrounding water mains. Although the Centre's administrators were enthusiastic about the use of local materials and the thermal quality of the building, they began systematically replacing the collapsing mud-brick walls with reinforced concrete structures.[5]

In 1963 the Desert Development Organisation discovered a major groundwater source sixty kilometres south of the Kharga Oasis, a wild harsh spot in the central desert of Egypt. This water well was expected to irrigate 1000 acres of farmland, a matter that led

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3 Ibid., p. 41.

4 John Feeney, Building for the 800 Million: An Interview with Hassan Fathy. *Aramco World*, v. 50, no. 4, July / August 1999, p. 29.

5 Richards, Serageldin and Rastorfer, 1985, p. 163.

the Egyptian government to propose the establishment of a series of new towns in the region. The government's master plan included a central village called New Bariz and six satellite hamlets in a region forty kilometres in diameter. Fathy was invited to design the New Bariz village (1964-1967) because of his previous experience with rural communities, as well as his ability to build them inexpensively. The village was intended to accommodate 250 families in order to farm the area around the town. The village would also serve as the administrative and commercial centre for the other six hamlets and the old Bariz town, which is six kilometres south of New Bariz village.[6]

New Bariz Village was the major project in the architect's mature phase. It was Fathy's first major opportunity for realising a village plan since he built New Gourna in 1948. The site plan consisted of a market, a workshop, a bus stop and a brickyard, all constructed; the administrative offices and two administrator's villas were partially built within two years (ills. 97-103). The construction of the town was going well and one more year of building would have completed the entire village. However, the war between Egypt and Israel broke out in 1967. As a result the agricultural plan for Kharga Oasis was changed and there was no longer a need for such a settlement. The construction of New Bariz stopped and the work was never resumed.[7]

Although, during this period, the output of Fathy's office was small, he designed the first clinic ever built in the *Saoura* (revolution) village, Kharga Oasis, in 1965.[8] In the same year, he also designed the High Institute of Social Anthropology and Folk Art in Aswan (ills. 104-106). The institute was commissioned by the Ministry of Culture to be located near the Nubian settlement of Abu Al-Riche, on the outskirts of Aswan, Upper Egypt. The project was intended to stimulate a deeper awareness of Egyptian history by presenting a synthesis of its cultural folk art in one place. Fathy argued that folk arts are the product of the intelligence of human beings and its development is more than the life-cycle of the individuals or even a whole generation. He also explained that folk arts continue from one generation to another accompanied with the appropriate additions

6 Ibid., p. 91.
7 Ibid., pp. 164-165.
8 Micheline Brown, A Trip to the Western Desert Oases. *Cairo Today*, v.2, no.7, 15-30 April 1981, p. 6. The French architect, Pascale Ourgaut, was conducting a research about Fathy's clinic Kharga Oasis in order to initiate a fund-raising for its preservation. Author's interview with Ourgaut, 2000.

which correspond to the changing needs of each age. Fathy conceived the project as an opportunity to exhibit aspects of Egyptian cultural heritage which had deteriorated as a result of the impact of western ideas. He believed that people forgot that a "civilisation is measured with what people give to humanity and life and not by what they borrow from other civilisations".[9]

In the short period between 1962 and 1965, Fathy experienced a series of misfortunes with projects relating to the government. In 1962 the Minister of Culture invited Fathy, along with other experts in different disciplines, to prepare a thorough study concerning the Nubian villages, Upper Egypt. These villages were threatened with flooding as a consequence of building the Aswan High Dam. However, the government wanted to relocate the inhabitants in Kom-mombo, Upper Egypt. Fathy saw the rebuilding of these villages as an opportunity to benefit from the ideas gained from the New Gourna experiment. Nevertheless, like the Mit El-Nasara village of 1954, the government relocated the Nubians in houses made of concrete.[10] In the following year, Fathy also faced another misfortune when the Municipal Housing Department in Aswan cancelled its contract with him to build three rural villages. The municipality regarded Fathy's traditional method of construction as inappropriate and it did not comply with the policy of the Ministry of Housing. Fathy's setbacks continued when the Ministry of Scientific Research also stopped another two projects in 1964. The first was an experiment with corrugated roofs to cover wide-span spaces, which Fathy had invented while working in Athens.[11]

The second was the prototype of Harraniya village near Cairo (ill. 107). Ironically, the Harraniya village was stopped at the time when the United Nations asked Fathy to

9 Fathy, Conservation of Monumental Areas & the High Institute of Social Anthropology and Folk Art. A Report Submitted to the Deputy Prime Minister of National Culture, 15 October 1966. Ms., FAAUC, no. 90, p. 6. (in Arabic).

10 Fathy, Summary of the Nubia's Villages and the New Villages in Kom-mombo. A letter Submitted to the General Egyptian Organisation for Construction, 8 April 1962. Ms., FAAUC, no. 127. (in Arabic)

11 Ms., FAAUC, no. 66. For description of the corrugated roof, see Chapter 3, p. 75.

supervise similar prototype villages in rural areas in Saudi Arabia.[12] At the time, Fathy hesitated to take on this position in the United Nations because of his nationalistic attitudes and his feeling of responsibility towards the progress of his country. "I saw that my country needs me now... we are in a very important period of construction... which requires the effort of every Egyptian engineer".[13]

Two years later, in 1966, Fathy was appointed by the United Nations Organisation for Rural Development, to be advisor to the government of Saudi Arabia for rural housing. This project represented a unique opportunity for Fathy to investigate traditional societies that had strong ties with Egyptian culture. The project was designed for the Ministry of Social Affairs. The idea of the project was to build two villages; one in Al-Gammoum, Fatma Valley, and the other in Al-Dariya, near Riyadh. The main objective was to develop a model-village to be repeated in all rural areas in Saudi Arabia in order to improve living standards. The design of the model-village was also intended to integrate contemporary ideas and Arabic culture.[14] However, the Minister of Finance, Prince Mousa'ayd Abd El-Rahman changed the concept and decided to build twenty model houses, one in each region of Saudi Arabia. The idea was to test the reactions of the people towards these prototypes before building whole villages. Like New Gourna village, Fathy believed that this project went beyond making a distinctive model-house and involved a concern with the "cultural socio-economic transformation in the Arabic village" which required extensive studies and researches in many different disciplines.[15] One of Fathy's prototypes was built and its environmental performance has been positive and valuable (ills. 108-109). Although it was never carried out on a large scale,

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12 According to a letter Submitted to the Ministry of Scientific Research (MSR) on 5 May 1964. Ms., FAAUC, no. 114. (in Arabic), the Harraniya Village Project was a collaboration between Fathy and the MSR. Because the literature on the Harraniya village was written in Arabic, other researchers, such as James Steele, were both confused and misled. While in his *The Hassan Fathy Collection*, 1989, pp. 22, 25, Steele assumed that the project was a collaboration between Fathy, Wissa Wassef and the MSR in 1940, in his *An Architecture for People*, 1997, pp. 112-113, 194, Steele proposed that this project was designed in 1957 for his friend Wissa Wassif as an extension to his Harraniya Weaving Village of 1952. Likewise, Amal Ahmed Abdou in her Ph.D. Wohn-und Siedlungsbau anhand von Hassan Fathys Praxis und Theorie. Thesis (Doctoral) - Technische Universitat München, 1993, p. 14, based her account of the Harraniya village on that of Steele's catalogue.

13 The United Nations is looking for an Egyptian Architect in Darb El-Labbana. *Sabah Al-Khair*, no. 404, 3 October 1963, p. 14. (in Arabic).

14 Fathy, Report of the Execution of the First Stage of the Rural Housing Project, Saudi Arabia, c. 1967, Ms., FAAUC, no. 103, p. 1. (in Arabic).

15 Ibid., pp. 5-6.

the United Nations' project for Al-Dariya heightened national awareness of its significance and architectural style.[16]

The following year, in 1967, Fathy also designed two other residential projects, the Fouad Riad house and the Shahira Mehrez apartment. Riad had known the architect in 1966 through their mutual interest in music.[17] Fathy designed the house in 1967 but the construction was only completed in 1973 (ill. 110). The site enjoyed a spectacular view overlooking the Giza Pyramids in the distance. Although Fathy was confronted by a difficult, narrow site, which imposed some limitations on the design, he was able to turn them into an advantage. Like the Hamid Said house (1942) in Marg, existing, fully-grown palm trees necessitated a specific solution to consider them within the plan of the house (ill. 111). The tightly controlled arrangement of volumes, spaces in plan and levels, refers to Fathy's unified vision during the design process. The richness of the Riad house arose from the distinctive juxtaposition of different geometrical forms which creates a complete sense of visual coherence. As in many of Fathy's later works, the lack of on-site supervision has resulted in essential changes in both plan and forms. These changes are probably strong evidence of Fathy's belief that traditional forms do not emerge from the architect's design only, but also come from the user's will.[18] Although Riad intended the house as a weekend retreat, he has used it as a permanent residence since its completion. Riad believes that "living in the house has had the effect of rebirth. With it, I've developed a strong love for beauty and nature".[19]

In the same year of building the Riad house, Fathy was confronted by a new task which was the only one of its type. Fathy was approached by Shahira Mehrez to redesign her flat, which occupied the top of a six-storey apartment building in the Dokki, a suburb of Cairo.[20] Unlike Fathy's individual houses, the Mehrez apartment represents one of

16 Steele, 1997, p. 131.
17 Richards, Serageldin and Rastorfer, 1985, p. 165.
18 Steele, 1997, p. 159.
19 Richards, Serageldin and Rastorfer, 1985, p. 165.
20 Ibid. Shahira Mehrez is daughter of Fathy's friend, the late Dr Gamal Mehrez, director general of the Department of Antiquities, Egypt. Like her father, she was interested in the study of the design and planning concepts in mediaeval Cairo as applied to an urban complex that was incorporated into an already existing urban setting. Her research resulted in a master of art, in which Fathy had contributed several interesting ideas. In 1972, Shahira Mehrez, submitted her thesis which entitled "The Ghawriyya in the Urban Context: an Analysis of its Form and Function", to the Department of Arabic studies of the American University in Cairo (AUC). Author's research in the AUC library, 2000.

Fathy's small-scale projects. The building was developed by Mehrez's mother in conjunction with another architect, but Mehrez was dissatisfied with the design of her own flat. Since the structural frame of the building was fully established, Fathy had to work within the existing layout and utilities.[21] In addition to the flat, the owner asked Fathy to consider in his design an office and a shop to satisfy her commercial interest of selling traditional Egyptian arts and crafts. Using the central staircase of the building as a starting point, Fathy placed the shop and the office to the left, while situating the apartment to the right (ill. 112).[22]

Fathy reinterpreted the lessons of traditional medieval Cairo and created a tight plan, which is a collage of different enclosed or semi-enclosed spatial types such as open court, *dūrqā'āh*, steps, *māshrābīyyāh* and *Shūkhshākhāh*. He used these elements to particularise each area and give it its own character and quality of enclosure (ill. 113). Fathy also created a subtle variation in floor and ceiling heights to give, what is a relatively small apartment, an overall sense of richness and spaciousness.[23]

Towards the end of the 1960s, Fathy produced another two unbuilt projects. The first was the Social Centre in Bulaq, Cairo in 1968. Its modernistic, curved plan is reminiscent of the flat Fathy designed for his brother Ali in 1960. The second was the Khoronfesh Nursery in 1969. Its plan is characterised by a central *qā'āh* flanked by flat-roofed *'īwāns* on either side for the care of the children. The facade lacks Fathy's domes or vaults, but the openings are covered by wooden latticework.[24]

The 1970s witnessed an increasing interest from the government in promoting Egyptian cultural identity. In 1970 the Ministry of Culture founded a cultural organisation in *Beit Al-Fan*, where Fathy was living. The main function of *Beit Al-Fan* was to provide educational programmes for artists. In 1976 the centre moved to *Wekalet El-Ghouri*, a restored Islamic monument, and its name was changed to the Centre for Egyptian Civilisation Studies. The director of the Centre was Dr Nawal Hassan, Fathy's close

21 Ibid.
22 Steele, 1989, p. 51.
23 Richards, Serageldin and Rastorfer, 1985, p. 165.
24 Steele, 1997, pp. 196-197.

friend. The function of the centre expanded to promote traditional solutions to the development of Egypt's culture. Like Fathy, Dr Nawal was concerned with preserving the remains of Egypt's heritage.[25]

Between 1970 and his death in 1989, Fathy produced an extraordinary number of buildings and projects, receiving commissions in places as far afield as New Mexico and Spain. Still the majority of his buildings were for Egypt and other Arab countries. The range of tasks handled was also very wide and included, mosques, houses, commercial buildings and entire planning layouts. Each building was marked by a unique response to the aspirations of the client, to the anticipated character of human behaviour and to the configuration of the particular site whether in the countryside or the desert. Even so there were dominant themes and typical forms, which added up to an architectural language based upon a general body of principles. This language also reflected the architect's ideas of both nature and history.

The 1970s represented the most productive period in Fathy's entire career, yet although he received and designed about twenty-six commissions for all types of building, only six of them were constructed. In 1970, for example Fathy received eleven commissions, but only one, the Luxor Cultural Centre, in Luxor was built (ills. 114-115). The centre, which was commissioned by the Ministry of Culture, was intended for theatrical and plastic arts in Luxor.[26] Fathy regarded this project as an opportunity to express his commitment to preserve Egypt's identity as well as to construct an example of authentic building in Luxor which was invaded by numerous examples of inappropriate foreign styles. Fathy recommended that a survey of the present buildings in Luxor would be of prime importance in identifying the authentic architectural style of the area so as to provide models for new buildings. The Ministry of Culture assigned some enthusiastic architects to this task but the outcome of the survey showed that all the buildings of Luxor City, after the Pharaohs' time, except for mosques and mausoleums had rejected the traditional architecture of the city. All the buildings in Luxor were built following the European classical and modern styles. Fathy argued that the results of the survey

25 Patricia Ochs, Nawal Hassan: Supporting Cairo's Living Heritage. *Cairo Today*, v.1, no. 21, 30 November 1980, p. 8.

26 Fathy, Report of the Design of Luxor City Cultural Centre: Resources of Inspiration, 3 October 1970. Ms., FAAUC, no. 207. (in Arabic).

would help in identifying the architectural character of the centre which would then become a prototype to be followed in building other residential and commercial buildings.[27] Unfortunately, the centre was not built in accordance with the architect's original design, although it featured many elements inspired by the traditional architecture of Egypt.[28]

Fathy's unbuilt projects included a mosque outside Egypt, in Sudan. The remaining sketches of the Mosque and Conference Centre of Sudan shows an assembly hall, office block and a minaret (ill. 116). Similar to the mosque in Pakistan, Fathy again employed Fuller's geodesic dome over the main prayer area. Other projects from 1970 were a six-unit staff quarters for the Institute Français de L'Archéologie Orientale (IFAO) in Cairo, a duplex housing block in Jeddah, Saudi Arabia, Princess Shahnaz villa in Luxor and Prince Sadruddin Aga Khan house, which was intended to be sited near the tomb of the Aga Khan III in Aswan, on an island in the Nile (ills. 117-118).[29]

Also of note was the New Gourna Tourist Village project in Luxor. It was another attempt to revive the New Gourna village by transforming it into a tourist village as a "solution to eradicate this disgrace". The tourist village was intended to be located at the intersection of the two main roads leading to the valleys of the Kings and Queens, which is used by a tremendous number of tourists. Fathy's main objective was to carry out the project in two stages. The first stage was to preserve and reuse the existing buildings of New Gourna village, including the theatre and the permanent handicraft exhibition building. The second was to retain the rest of the village's buildings as well as building the other proposed tourist buildings.[30] Unfortunately, the project, which represented a new hope to exploit the New Gourna village, suffered the same fate and ended at a standstill.

In 1971 the government decided to build a mausoleum as a memorial for the late

27 Ibid., pp. 1-3.
28 Author's visit to the Luxor Cultural Centre, 2000.
29 Steele, 1997, pp. 198-199.
30 Fathy, Transformation of New Gourna Village to a Tourist Village, a Report Submitted to the Minister of Tourism, 1970. Ms., FAAUC, no. 211, pp. 1-2. (in Arabic).

President Gamal Abd El-Naser. Fathy believed that the mausoleum should express and symbolise the role which Naser played nationally and internationally. He voluntarily prepared a sketch-design and submitted it to the High Council of Arts and Literature. Fathy's sketch-design was an elevation of a mausoleum characterised by a monumental, Pharaonic, pylon gate (ill. 119). However, when Fathy began to develop his designs, the Ministry of Housing invited architects for an architectural competition to design the mausoleum. Fathy did not participate in the competition because its requirements did not conform to his ideas, but the Minister of Housing invited him to be a member of the judging committee.[31] Fathy criticised the first prize design for its modern plain facades and lack of ornamentation except for a big scupper, high in the middle of the facade. He argued that the idea of the big scupper was drawn from Le Corbusier's church of Notre Dame-du Haut at Ronchamp (1950-1954). Fathy condemned the idea of maximising a small element, just to attract people's attention. "Monuments and memorial buildings should not go to people, but people should go to them".[32]

Although, aged 71 years, Fathy continued to promote his architectural ideas with a high degree of confidence, believing in his individual style and concepts. In the early 1970s, there was a growing tendency towards the promotion of tourism in the form of tourist villages along the coasts of Egypt. Fathy believed that to confirm the success of such villages "one has to inspire the guest with a feeling of hospitality, intimacy, beauty and permanency. These qualities should be conveyed to man by respecting the indigenous character of the design down to the smallest detail". As a demonstration of his principles, in 1971 Fathy decided to build a house for himself in Sidi Krier on the North Coast of the Mediterranean, Egypt (ill. 120). Fathy wanted to express the extensive ideas gained and formulated over more than forty years as well as to validate his traditional approach. He intended the house to be a prototype for a low-cost and beautiful structure as well as a model for a tourist-unit. Fathy's main aim was to encourage the government to use this house as a nucleus for a future research institute in desert settlements. He believed that "while all the elements of design were of the most traditional, all the materials were of local origin, yet the building is absolutely

31 Fathy, Judging the 'President Gamal Abd El-Naser Mausoleum's Competition, 20 March 1971. Ms., FAAUC, no. 200. (in Arabic).

32 Fathy, Notes on 'President Gamal Abd El-Naser Mausoleum's Competition, 27 March 1971. Ms., FAAUC, no. 201, p. 4. (in Arabic).

contemporary". He considered his house as an experiment to show that "man can build with beauty, little expense and simplicity anywhere, even in the desert, if he tried to work in harmony with nature".[33]

Fathy's intention was to crystallise the best qualities of Arab domestic architecture in the design of his house, although it was small. "As the French proverb says 'Big lady small hat, small lady big hat; this is a very small lady", Fathy said.[34] Built as a summer retreat, the plan of the one-floor house consists of a simple rectangle which contains all the constituents of the Arab house, such as *qā'āh*, *dūrqā'āh*, *'īwān* and the courtyard (ill. 121). It is one of the most beautifully studied plans imaginable for a small house. The various elements of the house are clearly articulated and marked in the elevations. The different functions can readily be perceived without entering the house, especially the domed reception area which dictates the plan. Although the main façade is dominated by the big dome, Fathy balanced the composition by another smaller dome and vaults which gave stability to the façade. In so doing he was successful in achieving a contrast in proportion between forms of the same type, and general contrast of geometrical shapes.[35]

The sense of dwelling as a religious influence was a theme in the culture in which Fathy was brought up and worked, but probably had a special personal relevance to him. However, themes on their own do not make architecture without forms. What made Fathy's own house so remarkable was the way it combined influences, yet transcended them, so implying the ingredients of his own style. The design of Fathy's house possessed sobriety and a noble quality of human scale. Thus all parts were drawn into a symphony of ideas and forms, moods and materials. The house also engaged with the very idea of dwelling, its practical needs. Fathy's house represented a seminal expression of the themes of his mature architecture.[36]

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33 Fathy, To Build a House: the House in Sidi Kreir, c.1971. Ms., FAAUC, no. 193. pp. 2-3.
34 Ibid., p. 2.
35 Author's visit to Fathy's own house in Sidi Kreir, 2000.
36 Dr Nawal Hassan confirmed that Fathy never used the house after its completion because "he was not interested in using it himself". For ten years the house suffered deterioration according to the neglect and lack of maintenance. Therefore, Fathy decided to offer the house to his nephew, who refused to take it because it was in a relatively remote place and is hard to look after. Consequently, Fathy offered the house to Dr Nawal Hassan, who welcomed the idea and bought it in 1986. "I have never imagined owning such a beautiful house". Author's interview with Nawal Hassan, 2000.

The outstanding features of Fathy's own house did not attract the attention of the Minister of Construction and the New Settlements until 1978. Impressed by the style and economics of the house and its appropriateness to the surrounding desert environment, the Minister advised the Planning Commission for the Development of Sidi Krier to commission Fathy to design a large community resort, following the same style and principles as his own house.[37] The project was to be built in stages; the first and only documented stage included the main office building, rest houses for clerks and another for visitors and supervisors. Unfortunately the project did not extend beyond this stage and stopped in 1979.[38]

At the age of 72, Fathy might have considered reducing his architectural work. However, he turned his attention increasingly towards writing as well as lecturing as a means of spreading his thoughts and ideals. In 1972, Fathy wrote *The Arab House in the Urban Setting: Past, Present and Future*. In this book he discussed the impact of the desert on forming Arab culture as well as shaping the style of his dwellings.[39] In the same year Fathy travelled to Lebanon and delivered a lecture about "Contemporary Egyptian Architecture". Architects, scholars and students from Lebanon attended Fathy's lecture, where he went through the reasons of his success and failure in New Gourna village. Fathy's main aim was to raise the self-esteem of the Arab architects in their own authentic architecture.[40]

In 1973 Fathy's most influential book, *Architecture for the Poor*, was published by the University of Chicago Press. It was an expanded edition for his Arabic book *Gorna: A Tale of Two Villages*, which was published by the Ministry of Culture, Cairo in 1969. Fathy was a competent note-taker and his book was the result of three years of notes. He said,

> I write things down because it is not fair that what you have met, the experiences you have passed by, should benefit just you. It has to pass to the others. Our people today may not understand the meaning of

37 Fathy, Construction of the North-Coast Centre in Sidi-Krier, a Report submitted to the Minister of Construction and the New Settlements, 24 November 1978. Ms., FAAUC, no. 189, p. 1. (in Arabic).
38 Fathy, a Letter to the Planning Commission for the Development of Sidi Krier, 10 December 1978. Ms., FAAUC, no. 190.
39 Fathy, *The Arab House in the Urban Setting: Past, Present and Future*. London, 1972.
40 Nazeeh Khater, Hassan Fathy This Evening: New Arabic Architecture. *Al-Nahar*, 10 January 1972, p. 7. (in Arabic).

> many things, but may be later on, if these ideas are preserved, they will be understood.[41]

Fathy acknowledged the sincere effort of the staff and other fellows in the Adlai Stevenson Institute of International Affairs in Chicago, America, who helped him in producing this book. "At the institute my ideas found a home, and the spirit so evident there will, I trust, enable me to put them into practice".[42] William R. Polk, the President of the Adlai Stevenson Institute and for whom Fathy designed a house in Colorado in 1972, believed that "Dr. Fathy embodies what the Adlai Stevenson Institute stands for: an opportunity for a man of vision and commitment to grapple with a great social problem".[43] Fathy's book earned him worldwide recognition. When Ibrahim asked Fathy why he had published the book in English he said, "for whom do I write in the Arabic language?" Fathy argued that his writings had produced a greater response in the west than in Egypt. He also believed that if his book was published in Arabic, no one would read it. He explained that the phenomenon of westernisation and imitation of the West still exists in the Arabic world. Fathy believed that because the book was first published in English and then translated into Arabic, it would be more widely read.[44]

For Fathy the key phase of crystallisation seems to have been around the time of the publication of his book, which summed up his ideas and discoveries and demonstrated the basis of his creativity running from 1927 to 1973. His book also created tremendous controversy among critics, architects and the academic staff in architectural schools. Fikry Morcos-Asaad believed that Fathy's *Architecture for the Poor* contained many useful lessons which "deserve to be read, discussed and learnt from by everyone concerned with housing".[45] Likewise, Colin Ward argued that "*Architecture for the Poor* is of absorbing interest, technically, sociologically, and professionally, and Fathy's reflections on the relations between the architect and society, and between the architect and craftsman, have universal relevance".[46] While the ideas generated in

41 Riddle, *Sketch*, February 1974, p. 44.
42 Fathy, 1973, p. xvi.
43 Ibid., p. xiii.
44 Ibrahim, 1987, pp. 19-20.
45 Fikry Morcos-Asaad, The Essence of Acceptable Housing, Book Review, *Architecture for the Poor* by Hassan Fathy, 1973. *The Architect's Journal*, 5 June 1974, p. 21.
46 Colin Ward, For the Fellah with Nothing, review of *Architecture for the Poor* by Hassan Fathy. *Royal Institute of British Architects Journal*, v. 81, February 1974, p. 36.

Fathy's book gained wide acceptance worldwide, some critics believed that his work links more naturally with fine artistic views. Moshe Safdie believed that "Fathy has a romantic love of the peasantry and one sympathises with his feelings. But it becomes apparent that he often stands at a distance from the peasants' lives when he admires them".[47] He also believed that Fathy's "architecture responds to the essence of the vernacular process", but one should "bring this to bear on contemporary problems". However, Safdie hoped that Fathy would be "able to adapt his concepts to the realities of an increasingly technological world" to help those "who share his views to create a contemporary vernacular".[48]

Like Safdie, M. Shaheen argued that while Fathy attacked emulating the work of the founders of modern architecture and their use of reinforced concrete in his book, the qualities of his own work were neglected in a number of countries. Shaheen explained that "there is no reason to believe that a modern vernacular, in concrete, shaped as human need dictates, enriched by imaginative landscaping, could not develop the Egyptian accent so cherished by [Fathy]".[49] Although some scholars seemed unable to understand Fathy's approach to architecture and dismissed him as a purely romantic idealist, a generation of younger architects appreciated his work and philosophy. Fathy's approach led these architects, such as Abdel Wahid El-Wakil and Omar El-Farouk from Egypt, to design more modern and sophisticated buildings.[50] The pattern of architectural apprenticeship was the familiar one, the pupils copying and imitating Fathy's views and so absorbing the principles he had devised.

In 1973 Fathy was invited by the High Council of Arts and Literature of Egypt to re-plan the commercial area surrounding the Al-Sayed Al-Badawy mosque in Tanta, a city in north Egypt. The idea of Fathy's preliminary-design was based on keeping the traditional character of the old area, such as its narrow streets, and avoiding any heavy vehicle roads cutting across the old area. The design also included a hotel that exhibited

47 Moshe Safdie, Joy in Mudville. *New York Review of Books*, 11 December 1975, p. 6.
48 Ibid., p. 7.
49 M. H. Shaheen, Book Review: *Architecture for the Poor* by Hassan Fathy, 1973. *International Journal of Middle East Studies*, v. 6, no. 4, October 1975, p. 513.
50 For a detailed discussion of the work of Fathy's followers, see Chapter 8.

Islamic architectural character.[51] In the same year, the Government of the Sultanate of Oman invited Fathy to conduct research into climate and architecture for development projects in Oman. The main objective of the project was to exploit natural resources in order to establish communities living at a high standard as well as to make a scientific evaluation of indigenous solutions to structural and thermal comfort problems. Fathy undertook the research in conjunction with John Norton, Alan Cain, Peter Sutherland and their tutor El-Farouk, Fathy's former student. They were a group of architects studying at the time at the Architectural Association School of Architecture in London under the supervision of Paul Oliver. This collaborative research project resulted from a meeting between Fathy and Oliver when they were giving some lectures in the Middle East Technical University in Ankara, Turkey.[52] Following the submission of the report Fathy was commissioned to plan the city of Sohar, although in the end he was asked only to prepare designs for the redevelopment of the central business district of the port of Sohar, after it was destroyed by a fire in April 1973 (ills. 122-123).

By the end of the 1970s, Fathy's ideas had spread well beyond national boundaries to the wider Arab world and to Europe. This change coincided with a significant reduction in the number of commissions he received in Egypt. In 1974, Fathy received four important commissions; the Islamic Complex in Tripoli, Lebanon (ill. 124), the Al-Wehda mosque in Cairo (ills. 125-126), the Nassif house and the V.I.P. residence, a large-scale palace in Saudi Arabia (ills. 127-128). The most important project of these was the Nassif house in Jeddah (ill. 129). It was commissioned eight years after the Al-Dariya project (1966), and represented another opportunity for Fathy to reinterpret the traditional architecture of Saudi Arabia. The owner, Dr Abd Al-Rahman Nassif, was among the few to initiate the revival of their own Arabic-Islamic heritage in architecture in Jeddah. The Nassif house evoked the value of tradition at a time when the influence of the International Style was widespread because of the oil boom of that period.[53] Nassif was raised in the historic *Beit* (home) Nassif, a traditional house in Jeddah,

51 Fathy, Re-planning Al-Sayed Al-Badawy Zone Project in Tanta, 2 February 1973. Ms., FAAUC, no. 154. (in Arabic).

52 Fathy, [Notes on Sohar Project], a Report Submitted to the Director of Centre for Economic Planning and Development, Muscat, Oman, 15 May 1973. Ms., FAAUC, no. 204, p. 1.

53 Sharief Alkhateeb, Arab Architecture for Those Who Can Really Live in Style. *Saudi Gazette*, 19 September 1979, p. 5.

which later became a museum. However, Nassif's background led him to determine to make an Arab-style house, but one appropriate to the twentieth century.[54]

Known as "*Al Maskan Al Sha'abi*" (the popular dwelling), the Nassif house lies three blocks from the Sands Hotel in the Al-Hamra area, overlooking the Red Sea. Fathy visited the site to get a thorough idea of the character of the area and construction began in the same year.[55] The documented drawings show a two-storey house with a double-height reception hall, ten different rooms, service areas, internal courtyard with fountain and open courtyard with garden pavilion on the first floor (ill. 130). The house featured Arabic Islamic elements including domes, wood-work *māshrābīyyāhs*, thick walls, enclosed patios and fountains of marble.[56] During the construction the client made some alterations to the original design with the help of Fathy's disciple, El-Wakil and the approval of the architect himself.[57]

The importance of the Nassif house comes mainly from its early idealistic and innovative attempt to revive Jeddah's lost heritage at the time when it was invaded by the modern office blocks and shopping malls which necessitated the demolition of many of its historic buildings. Jeddah was a medieval walled port and an important town built on the pre-Islamic trade routes between India and the Mediterranean. It was distinguished by its tower houses which were built of coral blocks, with elaborate wooden balconies. In the early 1970s the inhabitants of the coral houses began to build their houses following the new western-style houses along the coast. The Nassif house drew the attention of the people to their architectural heritage and stimulated the realisation that Jeddah was the only remaining example of Red Sea architecture in Saudi Arabia. The mayor of Jeddah, Mohammed Farsi, fought to conserve the buildings of old Jeddah by introducing the concept of listing buildings of historic interest.[58] A later generation of architects was ready to follow a similar direction in the search for identity in architecture and an appropriate style for modern times. Sami Angawi, a Saudi

54 Sharief Alkhateeb, The New Traditional Home of the Man Who Lived in the Beit Nasif. *Saudi Gazette*, 20 September 1979, p. 5.
55 Richards, Serageldin and Rastorfer, 1985, p. 168.
56 Alkhateeb, *Saudi Gazette*, 20 September 1979, p. 5.
57 Richards, Serageldin and Rastorfer, 1985, p. 168.
58 Rosie Llewellyn-Jones, The Coral City of Old Jeddah. *The Architectural Review*, September 1995, pp. 81-82.

architect trained in Texas, dedicated himself to saving and revitalizing a substantial amount of old Jeddah, called Al-Balad. He designed and built buildings appropriate to his tradition and culture as well as initiating the restoration of some showpieces such as the "Artists' House and Gallery". The Royal Family has also supported the Jeddah Historic Area Preservation Department to renovate and preserve some other buildings.[59] Ironically, while Jeddah's revival interest in its traditional architecture was, in part, the result of Fathy's intervention, no such result of Fathy's work was realised in Egypt, despite his tireless efforts to stimulate people to recognise their traditional architecture.

Fathy's disciple El-Wakil, in his own way, was also attempting to celebrate regionalism, to reveal its capacity for poetry, and to suggest its genuine, and progressive cultural potential. In 1975 Sheikh Ahmed Abdullah Al-Sulaiman, president of Datsun Company, commissioned El-Wakil to build a palace in Jeddah (ill. 131). Coincidently, both the Al-Sulaiman palace and the Nassif house were in the same suburb. Al-Sulaiman palace is larger than the Nassif house having twelve bedrooms, twelve bathrooms, two reception areas and three living rooms. Like Fathy, El-Wakil employed the same Islamic vocabularies in a subtle combination.[60] El-Wakil believed that the "challenge of architecture is to maintain continuity within the change that occurs by referring to the constants and reinterpreting them within the new context".[61]

As Fathy passed his seventies, he was not concerned only with erecting buildings and getting new commissions, but he was also very concerned with architectural education in Egypt and its role in preserving traditions and cultural values. Fathy's attitude towards education and culture is reminiscent of that of Frank Lloyd Wright, who said that education in America "is not even on speaking terms with culture".[62] Wright also believed that "America has always assumed that culture, to be culture, had to come from European sources – be imported".[63] Like Wright, Fathy argued that the training in the Egyptian architectural schools is based on that offered in the European schools, which concentrate on the need of cities for office blocks, flats and large public buildings.

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59 Ibid., pp. 82-83.
60 Alkhateeb, *Saudi Gazette*, 19 September 1979, p. 5.
61 A Palace Exemplifies 'Continuity and Change' in Islamic Tradition. *AIA Journal*, Mid August 1982, p. 106.
62 Frank Lloyd Wright, *The Future of Architecture*. New York, 1953, p. 29.
63 Wright, *Frank Lloyd Wright: Writings and Buildings*. New York, 1974, p. 298.

Ironically, while in Egypt the majority of the wealth comes from the land, the architectural schools paid no attention to the needs of the countryside. The irony is doubled when one considers that in Egypt, where the appropriate technology was in existence, no attempt was made to celebrate it. Thus the Egyptian architect found himself trapped into employing the technological methods of building systems imported from the west.

Fathy argued that the architect in Egypt should be trained to deal with rural problems, but he sensed that it would be impossible to change the curricula of university architectural departments. Therefore, he decided to establish his own postgraduate course, in which the immense rich museum of Egyptian culture would be seriously studied. In this way, the architect would have the opportunity to gain a profound understanding of all aspects of peasant building, materials and methods of construction as well as the rural problems.[64]

Fathy's concern for the education of the architect and his tireless efforts to solve the problem of housing the poor led him to the idea of establishing the International Institute for Appropriate Technology in 1976. The idea of this institute was similar to that of Wright's Taliesin Fellowship, a sort of rural retreat and architectural school established in 1932, in which young people helped about Wright's farm, while learning the fundamentals of his organic philosophy.[65] Wright explained that at the Taliesin Fellowship, the apprentices participated in the work of the farm, while every day they spent some time drawing their plans. In order to "develop initiative in these young people", Wright rotated the leadership every fortnight to give the opportunity to all the seniors to get a turn in leading the others. Wright also argued that the architect should be interested in his work and believed that it is important in his education to get a feeling for natural materials such as stone and wood as well as "a sense of construction into his hands on the way to his mind".[66] There is however, no indication that Fathy modelled his institute on Wright's Taliesin.

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64 Fathy, 1973, pp. 141-142.
65 Curtis, 1987, p. 199.
66 Wright, 1953, p. 257.

Like Wright's school, the main objective of Fathy's institute was to offer training for people from different disciplines, including architects, engineers, environmentalists, sociologists and administrators and to prepare them to work in the Egyptian villages. "My hopes for the future of the Egyptian countryside rest with these young architects of my country... I have always met the most enthusiastic and sympathetic response from young architects".[67] The institute also aimed to offer training for masons and craftsmen. The idea of the training program was based on working on actual projects and the use of energy efficient methods and local materials related to the trainees' own environment.[68] Fathy explained the idea of the institute to Osman Ahmed Osman, then the Minister of Housing. His main aim was to get the support of the government and have the initiative of establishing this institute in order to become the first in the Third World. Three successive letters were sent to Osman, but Fathy received no response or encouragement.[69]

Nevertheless, Fathy presented his idea to the Um Al-Kora University in Mecca, Saudi Arabia. He suggested that the university could be the main venue for the institute, while another branch would be situated in Cairo. Fathy also proposed that the university of Um Al-Kora would provide all the scientific and educational resources, while the Cairo branch would provide the experts, teachers, craftsmen and co-ordinate the activities being practised in Mecca and the construction sites. Fathy prepared the draft plan of the institute in both Mecca and Cairo, but unfortunately the University of Um Al-Kora, rejected Fathy's proposal.[70]

However, Fathy's disappointment did not prevent him from exploiting his contacts with many institutions and scientific organisations including the Architectural Association and the University of London in England, the University of California, Berkley, Accra University in Ghana and Helwan University in Egypt in order to establish a scientific

67 Fathy, 1973, p. 191.
68 Fathy, Memorandum on the Creation of the International Institute for Appropriate Technology, April 1978. Ms., FAAUC, no. 213.
69 Fathy, Letters to the Minister of Housing, dated, 7, 23 and 28 August 1976. Ms. FAAUC, nos. 214, 215, 216.
70 Ibrahim, 1987, p. 129.

kinship.[71] Fathy's tireless efforts indicate his dedication to the task of founding an organisation that would follow and apply his ideas. The University of California supported him towards achieving his dream, but his financial situation at the time was not sufficient to pursue his proposals further.[72]

The idea of the institute remained confined to Fathy's own house at 4 Darb El-Labbana Street in Cairo. Fathy believed that he could utilise his own commissioned projects as a training ground and began to organise a series of lectures for those who were interested in his ideas. Fathy's small atelier in his own house in the suburb of the Citadel became a sort of breading-ground for a traditional architectural approach. Young architects, writers, philosophers, anthropologists and artists came from many parts of the world to attend his lectures and to take the message of his ideals and philosophy back to their own countries. Sir James Richards believed that

> Hassan Fathy is essentially a philosopher and a teacher, and what he has to say about contemporary architecture, what he has been saying for years to the young architects who have sat at his feet - for to many such he has been a kind of *guru* - or to those who have listened to his discourses on the roof-top terrace of his house is of an importance that goes far beyond the Egyptian villages only just over the horizon.[73]

One of the most important projects, which Fathy's institute received was the Sadat village in 1976. President Anwar Al-Sadat showed his concern to reconstruct the Egyptian villages. The General Organisation of Urban Planning invited Fathy to become a member of the committee intended to prepare the preliminary study of the Sadat village. Fathy hoped that the Sadat village would be a prototype project and form the focus for the studies of his institute.[74] Between 1976 and 1978, Fathy struggled with the Ministry of Housing in order to realise this project. He prepared his designs, which included six model-houses and the centre of the village. The village centre consisted of a mosque, a market place, offices, a post-office, a café, a village guest building and a

71 Fathy, A Proposal of Collaboration Between the International Institute for Appropriate Technology, Cairo and the Department of Architecture, University of California, Berkley, 1978. Ms., FAAUC, p.4.
72 Ibrahim, 1987, p. 129.
73 Richards, Serageldin and Rastorfer, 1985, pp. 13-14.
74 Al-Sadat Village: A Prototype Project for Building the Rural Areas. *Al-Messa*, 10 January 1976, p. 6. (in Arabic)

canteen.[75] Unfortunately, like many of Fathy's previous large projects, the Sadat village was stopped for unexplained reasons.

The 1970s also witnessed another series of unbuilt projects including Al-Mashrabiya Tourist Centre (1976) in Cairo, the Nile Festival Village (1977-1982) in Luxor, the Wadi Zarga Village (1978) in Tunisia and the Rebat Hotel (1978) in Kharga Oasis, Egypt. The Nile Festival Village represented the most important unbuilt project of the 1970s and early 1980s (ills. 132-133). It was commissioned by a development company, whose future work was centered in Luxor. The development was a joint venture between the Nile Village Company, a commercial firm, and the Nile Festival Foundation, an American cultural organization. The village was intended to be operated by Hyatt International Hotel Operation and Management. The design of the village went through several phases between 1977 and 1982. The site occupied a large part of Tarh El-Bahr Island in the Nile River opposite Luxor City, Upper Egypt. Except for the existing ferryboat docking facilities, the island was controlled by the Nile Festival Village. The larger part of the island, south of the ferry dock, provided an ample area for the building site and sports recreation area, while the north end remained undeveloped. However the location of the island offered convenient access to the city of Luxor as well as to the historic sites on both sides of the Nile.[76]

Nevertheless, by the end of the decade Fathy realised some outstanding projects. In 1978 he built the Akil Sami house in Dahshur near Cairo, which showed Fathy's persistent appeal to local architectural traditions (ills. 134-135). Allied to this was nostalgia for indigenous virtues, which were to be claimed from Islamic and vernacular architecture. In the same year he built the Al-Sabah house and in the following year he built the Alpha Bianca house and the Kazerouni house.[77] The Al-Sabah house (1978) was another opportunity to build in the Arab world and resulted from the invitation of his Highness Prince Nasser Al-Sabah and his wife Hussa, to build a house for them in the Fentas area, Kuwait (ills. 136-138). Unlike Saudi Arabia, Kuwait has few historic

75 Fathy, Construction of Al-Sadat Village, Aswan, a Report Submitted to the Minister of Housing and Construction, 16 March 1978. Ms., FAAUC, no. 194, p. 3. (in Arabic).
76 The Nile Festival Village Development Study by the Nile Village Company, Ltd with the assistance of the Overseas Private Investment Corporation, September 1982. FAAUC, Ms., no. 233, p. 4.
77 Steele, 1997, pp. 199-200.

monuments which have been preserved as the impact of modernisation has taken over the traditional urban environment. Saba George Shibre, a Kuwaiti urban planner, warned that the rapid modern transformation would lead to the loss of Kuwait's identity. Although, Shibre's message has been to build in harmony with the Kuwaiti tradition, the government turned to outside experts instead.[78] Al-Sabah and his wife were among the few Kuwaitis, who wanted to preserve the identity of their country by reintroducing the Islamic house to Kuwait. The Al-Sabah house occupied a distinctive site overlooking the Arab Gulf. It was one of Fathy's last major projects, which exhibited the consistent set of principles, ideas and typologies, used by the architect throughout his entire career. The exterior is a combination of Fathy's usual shapes and forms, but his intricate design shows how simple geometrical shapes form the basis of the finished architectural conception. The original design of the house was made by Fathy but changes, interior design and supervision of the construction were carried out by Fathy's disciple, El-Farouk, who was commissioned to build three more Islamic homes in Kuwait.[79]

Fathy was one of the few Arab architects to receive commissions in Kuwait, whether for large scale commercial projects or residential buildings. The Al-Sabah house was an attempt to articulate an Arab identity in Kuwait at the time when foreign architects and planners were being employed for almost all the major projects. Numerous housing projects have been realised by western architects, including the Satellite Town (1960) by Paolo Portoghesi, the Al-Shaya Village and Al-Jabra housing by the Architects Collaborative and the East Sulaibikat Housing (1975) by Dissing and Weitling. Kultermann believes that these housing projects did not introduce the desirable solution that serves both the contemporary requirements and the Kuwaiti traditional way of life. He also recognised that most of the housing projects were built to serve foreign staff members working in Kuwait and "thus reflect the tradition of architecture of their home countries rather than the environment of the city of Kuwait". Few other attempts were made by Arab architects such as the Hawalli residential complex (1968) by the Iraqi architect, Rifat Chadirji and the 2330 semidetached low-cost houses (1972) by the

78 Udo Kultermann, *Contemporary Architecture in the Arab States: Renaissance of a Region*. Hong Kong, 1999, p. 167.

79 Abdullah Schleifer, Islamic Architecture and the Discipline of Design : the Work of Omar El-Farouk. *Arts & The Islamic World*, v. 2, no. 2, Summer 1984, p. 43.

Jordanian architect, Jafar Tukan. Like Fathy, both Chadirji and Tukan reinterpreted the traditional elements in a way to emphasise an Arabic architectural identity.[80]

The Alpha Bianca house (1979) was another outstanding commission built by Fathy outside Egypt (ill. 139). The artists Yannick Vu and Ben Jackober approached Fathy to build a house for them in Majorca, an island on the Spanish coast. It was intended to be situated within their fifty-acre site in the north-west corner of the island. The main idea of the design evolved from the owners' idea for their house to take the form of a desert-fortified *ribat* (palace). For centuries, this type of buildings was not used in the Arab world but it was common at the time of the Moorish influence in Majorca and in North Africa. The owners' idea was based on enclosing a rectangular terrace in front of the house and to break it down into various stepped floor levels to achieve the effect of the Moorish architecture (ill. 140).[81] Fathy determined the internal design of the house according to both the sequences of living spaces as well as their functional requirements, while the external form was shaped by the contrast in roof heights, juxtaposed as positive and negative forms. Although the house underwent some alteration during its construction, the main principles of Fathy's design remained unchanged. In fact, the house remains a distinctive example of Fathy's ingenuity in balancing different elements, and his application of a semi-monumental type of layout to a small-scale residence.[82]

While working on the Al-Sabah and the Alpha Bianca houses, Fathy ended the 1970s by building the Kazerouni house (1979), one of his most outstanding houses in Egypt (ills. 141-145). The two sisters, Samiha and Nazly Kazerouni, friends of Fathy, approached him to build a house in the countryside on Saqqara Road near the Riad house. They were impressed by Fathy's concept of using traditional materials and forms.[83] The Kazerounis believed that Fathy's traditional "style would blend in better

80 Kultermann, 1999, p. 178.
81 Steele, 1997, p. 164.
82 According to a rare photograph of the house taken by Salah Zeitoun, a well-known Egyptian architect, and an advocate to Fathy's ideas, the details of crenellations were altered, the number of domes was reduced and a projecting block beside the main entrance was added. Salah Zeitoun, *The 20th Century Architecture*. Cairo 1993, p. 214.
83 Robert Hefferon & Deborah Hefferon, House Glorious: Where Every Step Has A Meaning. *Cairo Today*, v. 3, no. 10, October 1982, p. 44.

with the peaceful green fields of the area than more modern styles".[84] Like the Alpha Bianca house, the Kazerounis suggested their essential requirements, including the number of bedrooms, a large living room, and a clear view of the surrounding countryside. However, Fathy sought to design a house which would hold a meaning for the family and satisfy their needs.[85] Although the house is a straightforward solution to the particular conditions, it represented a definitive model of Fathy's ideas of what a house should be both in plan and elevation.

The 1980s represent the last chapter in Fathy's life and career. Fathy had succeeded in producing several works of high architectural quality, based on principles drawn from the past, as well as his personal view of combining them with that of contemporary life. During this period Fathy was also the recipient of several major awards, which recognized his lifelong contribution to Islamic architecture, society and housing of the poor. Soon after the establishment of Fathy's institution, in March 1978, His Highness the Aga Khan, who had a longstanding interest in architecture, established a major architectural prize to encourage "a resurgence of true excellence in design throughout the Islamic world". He expressed a deep concern about "the vacuum in the contemporary search for solutions to design, construction and environmental problems in the Moslem World". In the light of its objective, a triennially prize of $500,000 was to be given for five awards. The categories for entries included housing, public buildings, community planning, restoration and re-use. Hassan Fathy was chosen to be a member of the first program's international steering committee (1978-1980). The steering committee was chaired by the Aga Khan and included Charles Correa of India, Oleg Grabar of Harvard University, Nader Ardalan of Iran and Sir Hugh Casson of Britain. Professor Renata Holod of the University of Pennsylvania was the convenor of the Award.[86]

The ceremony of the first Aga Khan Award for Architecture took place in the Gardens of Shalamar, Lahore, Pakistan, in October 1980, where the successful entrants were

84 Shadia Iskandar, House & Garden. *Egypt Today*, v. 18, no. 5, May 1997, p. 87.
85 Hefferons, *Cairo Today*, October 1982, p. 44.
86 Triennial Aga Khan Prize will award up to $500,000. *Architectural Record*, December 1978, p. 37.

presented with their awards.[87] His Highness the Aga Khan argued that the Steering Committee realised that a special achievement might fall outside the areas of the general criteria of the Award. Therefore, he established an additional Chairman's Award in order to honour such special cases. The Aga Khan announced:

> I have the pleasure of naming as the first recipient of the Chairman's Award Hassan Fathy, an Egyptian architect, artist, and poet, in acknowledgement of his lifelong contribution and commitment to architecture in the Muslim world.[88]

The year 1980 also witnessed another prestigious award for Fathy, when he received the Right Livelihood Award in the Swedish Parliament in Stockholm on the day before the Nobel Prize presentations. The idea of this award had been initiated and funded by Jakob von Uexkull, a Swedish-German writer and former Member of the European Parliament, in 1980. Uexkull argued that Alfred Nobel wanted to honour those who "during the past year have conferred the greatest benefit on mankind". And in the same spirit, the Right Livelihood Award aimed to stimulate a debate about the values underlying society as well as to support those who were working on practicable solutions to the real problems facing the world today. The award citation stated that Fathy had been recognised for "saving and adapting traditional knowledge and practices in building and construction for and with the poor".[89] The recognition Fathy gained as a result of the Right Livelihood Award enhanced his reputation both internationally as well as in Egypt. Meanwhile, the Aga Khan Award for Architecture generated widespread media attention, earning Fathy a far wider audience than any of his previous projects had ever done.

In October 1980, the Ford Foundation invited Fathy to help in both an urban conservation project in Hyderabad and the construction of Anand Gram, a centre for Delhi's folk artists in West Delhi, India. When Fathy arrived in New Delhi he preferred to get away from what he called "Western Delhi", and visit "Indian Delhi". "I came here from far away to meet the real India and not a poor imitation of New York or

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87 Mildred F. Schmertz, The 1980 Winners in the First Aga Khan Award for Architecture. *Architectural Record*, November 1980, p. 105.

88 Renata Holod and Darl Rastorfer, *Architecture and Community: Building in the Islamic World Today*. New York, 1983, p. 239.

89 A Guide of The Right Livelihood Award Foundation, Stockholm, 1998.

Boston". During his stay in New Delhi he visited several areas in the old city. However, he expressed his distress at seeing "marvellous old houses" being used as shops. He also believed that only the neglect and shortsightedness of the people had turned what was once a beautiful city into a slum.[90] In a lecture in New Delhi, Fathy defined the disastrous impact left by colonial history.

> There is something basically wrong with our cities and villages today. It is not merely that they have become surprisingly ugly, but that, inspite of the recent technical advances and the highly expert work... our townplanners and architect[s] are putting into town and village planning and architectural design, every single building manages to increase that ugliness, and every attempt to remedy the situation only underlines the ugliness more heavily.[91]

In the same year, Fathy received a number of commissions in Egypt including the Murad Greiss house (1980) (ills. 146-147) and the El-Menia village (1980). On the international level, Fathy also designed two further unrealised projects; the Roxbury Mosque in Boston and a house for the Mustafa Al-Naggar family in Majorca. Al-Naggar had executed the interior woodwork of the Alpha Bianca house and had worked with the architect on many other houses.[92] The most important commission of the early 1980s was the Dar Al-Islam village (1980) in New Mexico (ill. 148). This project gave Fathy the opportunity to exhibit all his experience and provided a clear conclusion for and summed up all his previous work. Dar Al-Islam also was the last project that Fathy built in the western world. The idea of Dar Al-Islam Foundation, an American-based, private non-profit organisation with an international board of trustees,[93] goes back to 1978, when Abdullah Nuridin Durkee, an American painter and editor who had converted to Islam, was studying in Mecca. There he met Sahl Kabbani, a Saudi Arabian engineer who had studied in the United States. Both Durkee and Kabbani had the same concern about the American Muslims who were isolated from other Islamic communities and in need of an Islamic social structure. The two men were captivated by

90 Scrape Mud, Not The Sky. *The Statement*, 31 October 1980, p. 3.
91 Quoted in Kultermann, Contemporary Arab Architecture. *Mimar: Architecture in Development*, no. 4, April / June 1982, p. 56.
92 Steele, 1997, pp. 200-201.
93 A. Schleifer, Hassan Fathy's Abiquiu: An Experimental Islamic Educational Centre in Rural New Mexico. *Ekistics*, v. 304, January / February 1984, p. 57.

the idea of establishing an Islamic centre in North America to serve Muslims and to introduce Islam in a tangible way to other people as well.[94]

In 1979 Durkee's wife met the Princess Muthie, daughter of Khaled ibn Abd El-Aziz, then king of Saudi Arabia. Durkee's wife explained the idea of establishing an Islamic Centre in America to the Princess, who showed an interest in the project. Consequently, the princess offered an initial gift to fund the search for an appropriate site.[95] A year later, in 1980, Durkee was introduced to Fathy by Fa'ard Gouverneur, a Venezuelan documentary filmmaker, who had converted to Muslim and studied Islam in Al-Azhar University in Cairo. Gouverneur became consultant to the Dar Al-Islam Foundation and executive secretary of the Islamic Text Society in London. In the early 1970s Gouverneur built his own complex of mud brick domes and vaults under Fathy's advice.[96] Both Durkee and Kabbani approached Fathy with the idea of their project, which impressed him and he enthusiastically offered to prepare the designs without fees.[97] When Fathy's *Architecture for the Poor* was published in the United States in 1973, it influenced many young people, who intentionally left their universities to live in rural communities. This was largely due, on the one hand, to the atmosphere of environmental crisis created by the 1970s energy shock, which led them to consider adobe architecture as an appropriate, environmentally responsible, technology. On the other hand, these young Americans were also attracted to varieties of eastern spirituality, which led them to convert to Islam. This further increased their interest in the traditional approach of Hassan Fathy.[98] However, Fathy was not only chosen because of the appeal to his economic structural system but also because he was by then regarded as "the father of Contemporary Islamic Architecture" for his remarkable efforts in stimulating the Muslim world to rediscover its own architectural identity.[99]

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94 R. Holod and Hassan-Uddin Khan, *The Mosque and The Modern World: Architects, Patrons and Design Since The 1950s*. London, 1997, p. 214. Dar Al-Islam was intended to be a cultural centre for more than one hundred Muslim families living in New Mexico. See also, I. Serageldin & J. Steele, *Architecture of the Contemporary Mosque*. London, 1996, p.154.

95 William Tracy, Dar Al-Islam: The Code and the Calling. *Aramco World*, v. 39, no. 3, May / June 1988, p. 24.

96 A. Schleifer, Hassan Fathy: A Voyage to New Mexico. *Arts & The Islamic World*, v.1, no. 1, Winter 1982 / 1983, p. 35.

97 Holod and Khan, 1997, p .216.

98 Schleifer, *Ekistics*, January / February 1984, p. 56.

99 Serageldin and Steele, 1996, p. 159.

In September 1980, Fathy and two Nubian masons came to New Mexico in order to build the mosque as a demonstration to the community of Dar Al-Islam of the techniques of building adobe vaults and domes without using costly manufactured wooden forms (ills. 149-151).[100] New Mexico has a long history of indigenous adobe buildings. In 1540, the Spanish Southwest explorers found the mud villages of the Pueblo Indians (700 AD). In 1590 the settlers had replaced the primitive earth-building techniques and set the standard of using adobe-brick. Although adobe-brick was widely used since then, constructing vaults and domes without centring was unknown in New Mexico.[101] However, more than three hundred people attended Fathy's presentation. The audience included architects and adobe builders from all over the United States and Mexico, as well as government officials who were interested in the economic potential of this construction system.[102] Socórro Velasco, director of the Mexican Department of Appropriate Technology, along with her crew, recorded the building process on film. Bill White, of the University of Arizona, videotaped Fathy's demonstration of the construction procedures as well as the incorporation of passive solar design and produced a video-training program.[103] Fathy also presented a series of lectures that progressed from a construction workshop to a teaching session. He summed up his experience through half-a-century including his most personal beliefs.[104]

In 1981, Fathy returned to Abiquiu to supervise the laying of the foundation for the school near to the mosque (ill. 152). It includes a library which is connected to the mosque by a long domed corridor. It also contains a number of small domed classrooms

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100 Simone Swan, Hassan Fathy Demonstrates Ancient Construction Methods in New Mexico. *Architectural Record*, v. 168, December 1980, p. 39.

101 David Easton, *The Rammed Earth House*. Vermont, 1996, p. 5. See also, Paul Graham McHenry, *Adob And Rammed Earth Buildings: Design and Construction*. Arizona, 1984, p. 6. P. G. Mchenry hosted Fathy in his house during Fathy's visit to New Mexico in 1981. P. G. Mchenry in correspondence with the author, 6 April 1999. For more information about adobe buildings as well as the architects and builders, who were influenced by Fathy's project in New Mexico, see Joseph M. Tibbets, *The Earthbuilders' Encyclopedia: with A Current " Who's Who" and Display Section for Tradesfolk, Suppliers & Professionals*. New Mexico, 1989.

102 Schleifer, *Ekistics*, January / February 1984, pp. 57, 59.

103 Swan, *Architectural Record*, December 1980, p. 39.

104 Serageldin and Steele, 1996, p. 155, note 4.

arranged around a series of internal courtyards (ill. 153).[105] Fathy, who was unable to gain acceptance for mud-brick construction and the use of vernacular idioms in his own country, regarded this project as another far-reaching opportunity for designing a community in a more relaxed and responsive environment. In this respect, the client and the user were more related to Fathy's private clients than to his governmental ones.[106]

Fathy's designs of the 1980s, like the works of the 1970s in Egypt, continued to exhibit the features now widely recognised as characteristic of his work. Although he received few commissions between 1981 and 1989, all his projects were built. In 1981 Fathy built one of his most impressive buildings, a rest house in Garf Husein, Aswan, Upper Egypt, for the late President Anwar Sadat (ill. 154). While President Sadat realised the power of traditional culture in the image of Fathy's buildings, Fathy believed that Sadat was the symbol of the Egyptian farmer.[107] The site overlooks the magnificent view of Lake Naser and was intended to be used during Sadat's official visits to this remote area. During the construction of the building President Sadat was assassinated. Since the work carried out was poorly executed, the building has never been completed or occupied.[108] This project was originally conceived as a complex consisting of three separate buildings; the security buildings, the guest and family buildings and the Sadat rest-house itself (ill. 155). All these blocks are arranged around a series of courtyards and organised according to the status of each.

The Presidential building revealed Fathy's capacity for effective monumental expression. A dominant architectural element of the building was the platform between the guest and the rest-house blocks. It was worked out ingeniously to allow views across the surrounding landscape and to blend the building with its settings. The platform also underlined Fathy's interest in the ceremonial meanings of platforms in ancient Egyptian architecture. Although the project was monumental in scale, it nevertheless exhibited all

105 Schleifer, *Ekistics*, January / February 1984, p. 59. Six years after the completion of the mosque in 1981, only half of the complex was finished, with an estimated $630,000 required to complete the project. Doubts of the future of the centre arose among the founders and as a result Durkee resigned from the Board of Directors of Dar Al-Islam in 1989. See Serageldin & Steele, 1996, p. 159. In 1990 Durkee went to Cairo to pursue his Islamic studies at Al-Azhar University. Since then the community has been operated by some caretakers, a situation that Fathy did not live to see. See Holod and Khan, 1997, p. 216.

106 Holod and Khan, 1997, p .216.

107 Fathy, Presidential Rest House, Aswan, 20 March 1980. Ms., FAAUC, no. 224, p. 1. (in Arabic).

108 Richards, Serageldin and Rastorfer, 1985, p. 168.

the features associated with his other projects. Despite the fact that it was never used, the Sadat rest-house must rank as one of the most subtle and complex projects to be conceived during Fathy's long career. It demonstrated one possible way of blending the traditional culture with political requirements.

In 1982 Fathy's dream for New Gourna was revived when a team of enthusiastic architects from Egypt, Lebanon and Morocco, conducted research at his Institute for Appropriate Technology. They wanted to study and practise the traditional building techniques and have a better understanding of the use of local materials. The programme included visits to the Pharaonic and Islamic monuments as well as to many of Fathy's works. Fathy arranged a five-month training session for the team to restore the theatre in New Gourna village. Since its building in 1948, the theatre had suffered from lack of maintenance and was in a poor condition. All its parts, including the stage, the halls and the surrounding walls had become structurally dangerous. Another objective of the training session was to set up a vocational education program in the training centre established for the restoration of the theatre. Fathy called one of the masons, who worked with him in 1948, to train and supervise along with the architects, a group of twenty-eight apprentices, who were introduced to the making of sun-dried mud-brick and building walls and domes.[109]

Among the team were two Moroccan architects, Ali Moustaader and A. Berzem. They made use of their free time to carry out an in-depth study in New Gourna village. Their study included surveys, photographs, sketches and door-to-door interviews. After the completion of the restoration of the theatre they continued their field study, which resulted in a doctoral thesis for the School of Architecture, University of Clermont-Ferrand, France, entitled "Hassan Fathy: The Sage of Arab Architecture".[110]

In June 1984 the American University in Cairo awarded Fathy its first honorary Doctorate for his lifelong struggle to revive Islamic architecture.[111] In the same year, the

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109 Ali Moustaader, Gourna: The Dream Continued. *Mimar*, no. 16, April / June 1985, pp. 54-56.

110 Moustader, *Mimar*, April / June 1985, pp. 57-58. A. Moustader and A. Berzem, Hassan Fathy: The Sage of Arab Architecture. Volume 1: The Thoughts of Hassan Fathy by A. Moustader. Volume 2: Gourna the Unfinished Dream by A. Berzem. (c. 1986)

111 Honorary Doctorate for Father of the Egyptian Architects. *Al-Mosawar Magazine*, 14 June 1984, p. 7. (in Arabic).

International Union of Architects (UIA) decided to establish its Gold Medal Prize, to be the highest honour for architects. The Union regarded this prize as being as prestigious as the Noble Prize and awarded it for artistic, scientific and social achievements.[112] In November 1984 the UIA awarded Fathy its first gold medal in recognition of his "outstanding achievements in the field of architecture, and for his contributions and lifelong service to the improvement of the quality of life and of society throughout his professional life".[113] The medal was presented to Fathy at the world congress of the UIA, held in Cairo in January 1985. Status as one of the leading architects of his generation was recognised in the same year by the publication of Sir James Richards' *Hassan Fathy*.[114]

During the 1980s Fathy's concern was to broaden the range of his work and bring it to the attention of a wider public. Fathy was commissioned to design a sizable number of substantial buildings, including the Hatem Sadeq house (1981), Andrioli house (1984) (ills. 156-157), Hassan Rashad house (1986) (ills. 158-159); all in Egypt. He also built the Khalil Al-Talhuni house (1988), in Amman, Jordan, which was his last house to be realised outside Egypt (ills. 160-161). Before Fathy's death in 1989 he designed a children's hospital in Siwa Oasis, and the Tilawi residence for the governor of Kharga Oasis, both in Egypt. By the late 1980s the political scene in Egypt was dominated by the National Government which articulated the concern for stability, prosperity and comfort which pervaded Egypt society. Egypt was experiencing a period of considerable wealth and there were remarkable changes and progress in the arts, literature, music and education systems. The urban landscape was also changing, especially along the coasts of the Mediterranean and the Red Sea, which were dominated by large-scale tourist resorts. Fathy had predicted such a tourism boom almost two decades earlier when he built his own house in Sidi Kreir.

Fathy's last project was a proposal for a resort village for the Journalists' Association on the northwest coast of the Mediterranean Sea in 1989. More than eighteen years after

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112 Hassan Fathy, 1985 UIA Gold Medal Recipient. *International Union of Architects*, Bulletin, November 1984.

113 UIA's First Gold Medal Awarded to Hassan Fathy. *Architecture: The AIA Journal*, v. 74, no. 1, January 1985, pp. 25-26.

114 J. Richards, I. Serageldin and D. Rastorfer, *Hassan Fathy*. London, 1985.

building his own house which was intended to be a model for tourist and resort villages on the North Coast, Fathy's dream had come true. A few months before his death in 1989, Fathy was approached by the Egyptian Journalists' Association to build a resort village on the North Coast (ills. 162-164). He designed this village without any fees because he appreciated the important role of the media in spreading ideas about architecture and the environment.[115] In this project Fathy invoked the idea of appropriate technology and self-building systems and emphasised the role journalists could play in spreading these ideas to a wider public.[116]

Unfortunately, Fathy did not live to see his last project realised. It is his niece, Souad Hamdi, who provided an account of Fathy's last days. In the last year of his life, Fathy had strong hopes and looked well, although he was ill. The night before he died, Fathy was still giving instructions to the architects preparing the working drawings for the Journalists' village. On Wednesday 29 November 1989, in his eighteenth-century Mamluk house, Fathy developed a fever and died early on Thursday 30 November. He was 89 years of age and had remained active until the very end of his life. His funeral was set for Friday 1 December in Cairo.[117]

Although, one year before his death, Fathy had donated his entire drawings and writings collection to the Aga Khan Award for Architecture, his family decided that the collection should remain in Egypt and refused to release the collection. Instead they donated the entire collection to the American University in Cairo in order to create the Hassan Fathy Archive, which would be a useful and accessible source of information for all researchers.[118]

At the time when Fathy died it was difficult to achieve a balanced and clear assessment of his contribution to the architecture of Egypt. Most assessments emphasized that Fathy recognized the discipline of architecture in fundamental ways and realized his ambition of creating an architecture which extended principles derived from the past. A

115 Architect Hassan Fathy Signs the Design of the Journalists' Village. *Al-Ahram*, 21 November 1989, p. 12. (in Arabic).
116 Hassan Fathy's Village for Journalists in the North-West Coast. *Alam Albena*, no. 162, January 1995, pp. 26-27. (in Arabic).
117 Author's interview with Souad Hamdi, Fathy's niece, 2000.
118 Ibid.

few months after his death, from 20 to 22 March 1990, the Faculty of Fine Arts of Helwan University in Cairo held a seminar as well as an exhibition in memory of Hassan Fathy. It was a sign of appreciation of Fathy's efforts by all his students and those who were influenced by his philosophy. The seminar included participants from all the architectural departments in the Egyptian universities, the Engineering Syndicate, the High Council of Literature, the Society of Egyptian Architects and the National Centre of Building and Housing Research. Many of the contributors acknowledged the importance of Fathy to the future development of Egyptian architecture.[119]

The contribution of Ibrahim was characteristic of the tributes accorded Fathy. He argued that Fathy had left a rich architectural legacy that expressed both human and environmental values. He explained that Fathy's philosophy of developing architecture for the poor was not simply mud architecture, but the ideas generated regarding the use of local materials and applying traditional building methods. Ibrahim asked "what after Hassan Fathy?" He believed that this question would have an answer only when the architectural departments of Egypt's universities realized the importance of Fathy's theories and included them in their educational curricula. Ibrahim argued that if the West appreciated Fathy's ideas, we also should do the same in order to counterbalance our backwardness and achieve the continuity of Fathy's ideals and concepts. Professor Ez El-Din Fahmy of the University of Al-Azhar, Cairo, argued that Fathy embodied architectural ideals which had a remarkable impact on the architects' role and thinking toward their society. Fahmy also emphasized that Fathy's ideals should be thoroughly examined, to illuminate some architects' misconceptions concerning his theories.[120]

Yahia El-Zeini, Professor of Architecture in the Faculty of Fine Arts, claimed that although Fathy undertook responsibility for housing the poor, his success in achieving his aims was compromised through his lack of diplomatic skills in dealing with governmental authorities. El-Zeini explained that Fathy had continually battled with government authorities and argued that there was a cultural and scientific chasm between Fathy's thinking and the authorities' and that Fathy was not prepared to

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119 Intellectual and Scientific Symposium, *Architect Hassan Fathy*, Faculty of Fine Arts, Helwan University, 20-22 March 1990. (in Arabic)

120 Ibid.

compromise where his own ideas and philosophy were concerned. He also remarked that Fathy was honest and outspoken about the authorities' shortcomings and this led to decision-makers seeing him as arrogant. El-Zeini believed that Fathy was ultimately unsuccessful as an advocate for his cause in his own country, although he achieved a highly regarded position worldwide. "A prophet is not without honour save in his own country".[121]

In the West, Fathy's death also renewed discussions among intellectuals who were interested in his idealistic approach. In an appreciative obituary published in *The Architectural Review* some months after Fathy's death, James Steele wrote about the romantic architect whose work had passed out of favour in his own country. The obituarist, apart from praising Fathy's architecture and scholarship, gave a vignette of the importance of Fathy's ideals for other architects. Steele believed that Fathy created a highly appropriate spatial and structural system, which inspired those who were searching for

> deeper meaning in their own work, but feared the loss of creativity and individuality that they suspected a more traditional direction might entail. Fathy's architecture offered tangible proof that such fears were inconsequential, and he has been and will continue to be a role model for many.[122]

In the spring following Fathy's death, Simone Swan, director of the Swan Group, based in Presidio, Texas and the Brent Porter of the Pratt Institute organized a memorial celebration for Fathy at the Cathedral of St. John the Divine in New York. People from every faith attended the service, where they saw slides of Fathy's built work and listened to many messages from prominent figures including, Charles Moore, consumer and health advocate Ralph Nader and Britain's Prince Charles.[123]

Just as the assessments of Fathy's contemporaries at the time of his death revealed aspects of his architectural ideas, his behaviour and attitudes towards others, his archive in the AUC also gave new insights into his interests. Fathy had always been interested in reading international architectural publications such as the *Architectural Review* and

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121 Ibid.
122 Steele, Obituary. *The Architectural Review*, v. 187, January 1990, p. 9.
123 Simone Swan, Elegant Solutions. *Aramco World*, v. 50, no. 4, July / August 1999, p. 26.

Architectural Design in order to keep up with what is going on in the wider architectural field. Although he admired the writings of Charles Jencks and Christian Norberg-Schulz, he saw the writings of the German writer, Titus Burckhardt as more influential than those of any other writers. He also admired the architectural works of individuals such as Frank Lloyd Wright, Kenzo Tange, Louis Khan and Philip Johnson.[124]

Photographs of Fathy and comments in the writings of some of his admirers revealed him as short, thin, elegant and attractive man, 'a real charmer'. He was often compared to Buckminster Fuller, not only for his enthusiasm and original ideas, but also for his appearance and behaviour. He was a non-stop talker, lapsing from French to English to Arabic with complete fluency. Fathy always had the feeling that he was running out of time, so he repeated the same stories over and over again in order to put across his ideas to those who listened to him. He was a man of contradictions, who, while devoting his lifetime defending his nation's traditions and culture and quoting verses from the Koran, was well dressed in western clothes, spoke fluent English and played Bach and Brahms on his excellent German violin.[125] His speech conveyed absolute certainty and was delivered with a firm and steady tone, which gave his criticisms of other architects the stamp of authority.[126] However, the key to Fathy's importance and his complex personality and work can only be revealed by examining the relatively few buildings which form a synthesis of his attitudes and architectural approach. The analysis of Fathy's buildings and the principles of his architecture forms the subject of the following chapter.

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124 Fathy's own library included books such as, Titus Burckhardt, *Mirror of the Intellect: Essays on Traditional Science & Sacred Art*. Cambridge, 1987, Charles Jencks & George Baird, *Meaning in Architecture*, London, 1969 and Frank Lloyd Wright, *The Future of Architecture*. New York, 1963. Fathy annotated almost every page of these books. It also contained John M. Jacobus, *Philip Johnson*. New York, 1962 and Works of Kenzo Tang and Urtec. *JA*, August-September 1976, both signed by Philip Johnson and Kenzo Tang, who expressed admiration for and appreciation of their friendship with Hassan Fathy.

125 Robert B. Marquis, Egypt's Prophet of Appropriate Technology. *AIA Journal*, December 1980, p. 38.

126 Blumenfeld, *Architectural Association Quarterly*, v. 6, nos. 3-4, 1974, pp. 53-57.

CHAPTER FIVE

BUILDINGS AND PROJECTS

Vocabulary and Syntax

Fathy understood buildings to be the background or framework for human existence. His domestic buildings are like his commercial and public buildings; both were conceived as being generated from the plan, which gave form and order to the space within. To a large extent Fathy had broken down the barrier between domestic and commercial buildings; both are measured and scaled by the human body and its experience. All his buildings and projects, which were mainly domestic, comprised the same architectural elements which were drawn from the Arab house. Indeed, the departure point for all Fathy's architecture and beliefs was the Islamic-Arabic house, with its structural clarity and beauty.[1]

"The house of my father, where every step has a meaning". Fathy chose this quote from Antoine de Saint Exupery to express his feelings towards the design concept of his buildings. Fathy argued that the "steps in the house of the Arab's father had been actually traced in traditional Arab architecture, in which forms and spaces were dictated by habits and tradition". However, in his designs, Fathy had given extra care "to bring the traditional Arab forms and spaces up-to-date without missing one step".[2] Fathy also argued that, "if you remove the accents of style, the decorative values, you will find [Islamic architecture] more modern, even universal".[3]

The Islamic way of life strictly defined the particular roles of man and woman in relation to the physical environment. While the public areas in a house are the domain

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1 The architecture of Islam is dictated by the Islamic way of life which is shaped by the instructions of the religion of Islam. Its forms differ from region to region according to many factors including tradition, habits, climate and vernacular forms. Islamic-Arabic architecture denotes a specific architecture that originated in the area of the Arab countries. Egyptian architecture refers to the vernacular architecture which is dominant in the Egyptian countryside and other remote areas. Islamic-Egyptian architecture is that created after the introduction of Islam to Egypt and is similar to that in the other Arab countries.

2 Fathy, Discussion of Data for the V.I.P. Vila in Tabuk, a Report submitted to the Authorities Responsible for the Decision on the Design for the V.I.P., 20 February 1974. Ms., FAAUC, no. 186, p. 4.

3 Jayme Spencer, Out of the Past. *Cairo Today*, v. 11, no. 1, January 1990, p. 70.

of men, the private and family areas are the domain of women. The privacy of the family was also an essential element which affected the shape and the plan form of all traditional Muslim houses, to be clearly defined as public, semi-public and private spaces. The cultural and religious emphasis on visual privacy in Islamic communities has also tended to produce an inward-looking plan with plain external walls to discourage strangers from looking inside. Climate also played an important role as a moderating factor and complemented the cultural and religious need for privacy. The houses of the hot arid zones such as Egypt, Iraq and India, are introverted, where family-life looked into a courtyard rather than looking out upon the street. Their houses were built of local materials and also incorporated elements responsive to the climate of the area, including the *qā'āh*, the *mālqāf*, the *tākhtābūsh* and the *māshrābīyyāh*.[4]

As a devout Muslim, Fathy fully understood the function of these elements and their balanced relation to the environment. However, the architectural vocabulary which governed the design concept of Fathy's buildings and highlighted their distinctive characteristics were, the *mājāz* (entrance), the courtyard, the combination of the *qā'āh* and the *mālqāf*, the *tākhtābūsh*, the *māshrābīyyāh* and the building materials including the reuse of fragments of historical buildings. He also employed vocabularies drawn from Egyptian vernacular architecture such as the dome and the vault, which for the first time, appeared in the designs of his Mansoura exhibition in 1937.[5]

The *mājāz* (entrance)

In Arab houses there were two entrances; the *mājāz* (the main entrance of a house), which usually opens onto a courtyard and the doorway, which is the main external feature at ground floor level. The *mājāz* was designed to open into a blank wall to obstruct views into the inside from outside in order to preserve the privacy of the family. On the other hand, the doorway is functional and modest because ostentation is

4 For general studies of the Islamic house, see H. Fathy, *The Arab House in the Urban Setting: Past, Present and Future*. London, 1972, R. Hillenbrand, *Islamic Architecture: Form, Function and Meaning*. New York, 1994 and G. Michell, *Architecture of the Islamic World: Its History and Social Meaning*. London, 1978.

5 For the influence of domes and vaults on Fathy, see Chapter 1, pp. 33-34.

discouraged according to the egalitarian basis of Islam (fig. 1). Fathy explained that some historians attributed the unpretentious doorway to the owner's reluctance to show off his wealth, which would attract burglars, but this is a superficial reason. In fact, in traditional Arab houses, the real entrance to the house is the one which opens onto the main courtyard. In the Arab cosmology the four walls of the courtyard indicate the four columns carrying the dome of the sky and the courtyard symbolizes their private piece of sky. However, they preferred to have the main entrance open into this clean and holy space rather than into the public street. Fathy believed that "the open space of the street is on the scale of the city, while the courtyard is on the scale of the house".[6] Fathy employed this concept in almost all his houses.

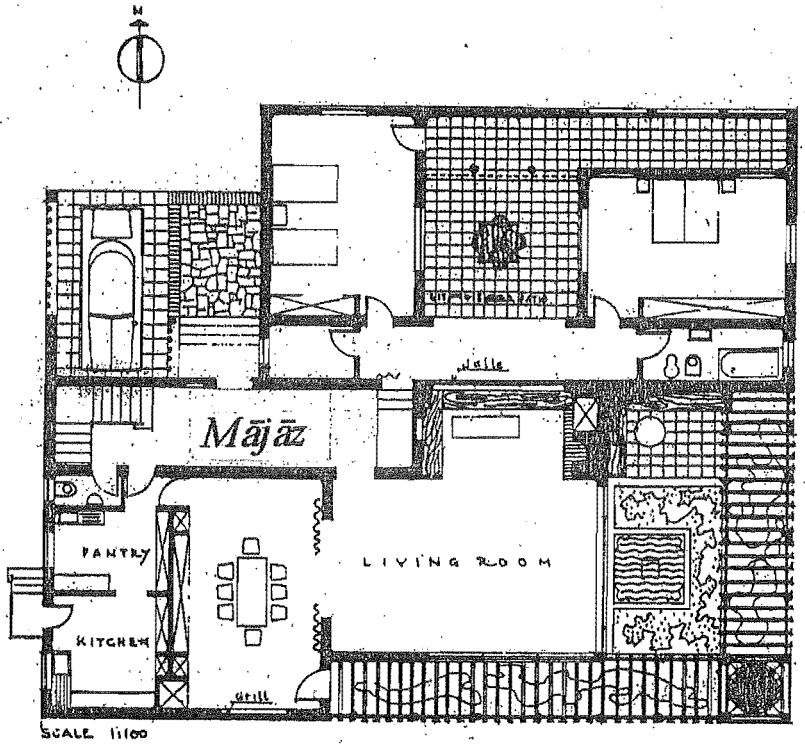

Fig. 1. The *mājāz*: Shri Zahir Ahmed house, Hyderabad, India, 1963.

(Source: Steele, 1989)

6 Ms., FAAUC, no. 186, p. 6.

The courtyard

The courtyard is the most essential element, which represented the core of all Fathy's designs. The concept of the courtyard is commonly used in traditional architecture, both rural and urban, of the hot arid regions from Iran in the East to the shores of the Atlantic in the West. The courtyard dates back to the Graeco-Roman tradition (c. 1900 BC.) in Arabia. With the advent of Islam (632), Muslims adopted the concept of the courtyard because it suited their religious and social needs, especially the degree of privacy needed. The arrangements of the courtyard also provided a satisfactory solution to their specific environmental problems. The size of the courtyard varies, as does the number, according to the available space and resources.[7] Fathy sought inspiration from historical examples of Arab desert architecture such as the Ukhaider palace in Iraq (fig. 2), Quasir Amara in Jordan and Dar Lajimi in Tunis as well as the twelfth century courtyard-houses of Al-Fustate city, Egypt (fig. 3). He was also stimulated by the houses of mediaeval Cairo such as Al-Souheimi, Zeinab Khaton and Moheb Ad-din Al-Shafie.

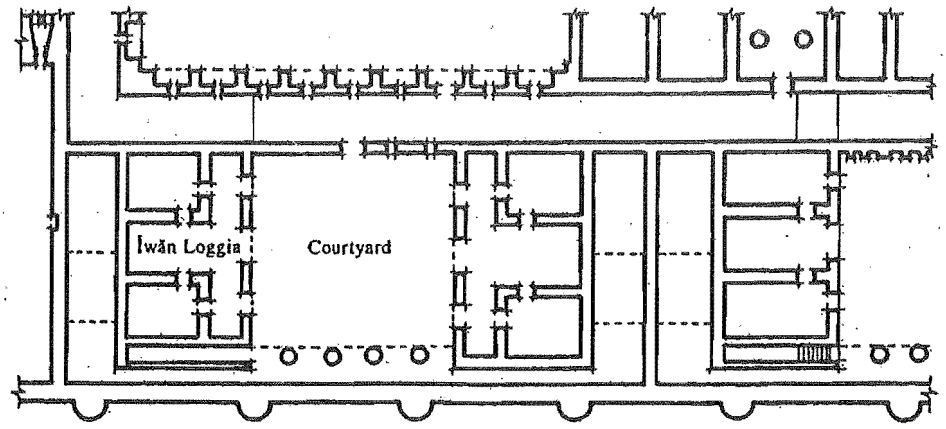

Fig. 2. A courtyard house: Al-Ukhaidar Palac, Iraq, 778.
(Source: Fathy, 1986)

7 Miles Danby, Privacy as a Culturally Related Factor in Built Form, in Ben Farmer and Hentie Louw, eds., *Companion to Contemporary Architectural Though*. London, 1993, pp. 138-139.

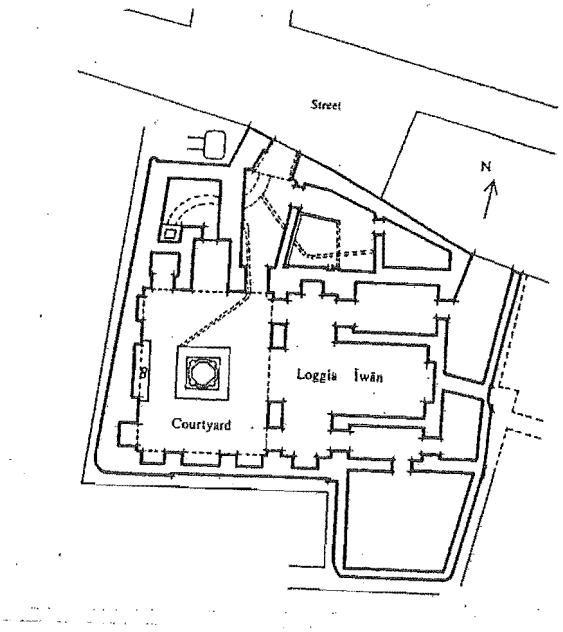

Fig. 3. The 12th courtyard-house of Al-Fustate city, Egypt.
(Source: Fathy, 1986)

Fathy employed the courtyard in his houses, not only to achieve privacy, which is a necessity in Arab society, but also to enhance the thermal comfort inside a house. The courtyard is an effective device to generate air movement by convection. In hot dry zones the air of the courtyard, which was heated by the sun during the day, rises and is replaced by the cooled night air coming from above. The accumulated cool air in the courtyard seeps into and cools the surrounding rooms. During the day, the courtyard is shaded by its four walls and this helps its air to heat slowly and remain cool until late in the day.[8]

Although, during the thirties, Fathy's houses exhibited the influence of modernism he used an internal courtyard for the first time to provide privacy in the Sada Al-Bariya house (1930) and the Isabel Garvice house (1937). In the early 1940s, Fathy began to build his traditional houses and in the Abd Al-Razik house (1941) introduced a central courtyard to achieve the separation between the formal reception and the family area. One of the ingenious solutions which showed the sensitivity of Fathy as an artist in

8 Fathy, *Natural Energy and Vernacular Architecture: Principles and Examples with Reference to Hot Arid Climates*. Chicago, 1986, pp. 62-63.

terms of respecting the environment, was the 1945 addition to the Said house. The addition surrounded the existing trees near the studio to create an inner courtyard, which joined the old and new parts of the house (ill. 26).[9]

Unlike the Said house, the Hamdi Seif Al-Nasr house underwent fundamental changes between the preliminary design in 1942 and the final construction in 1945. Fathy's gouache for the first design expressed his primary concern to achieve harmony between the house and its surroundings, such as the flowering trees which complement the natural earth colours of the house.[10] Fathy's first proposal was a clear interpretation of the client's requirements. It shows a fortress-like building raised up on a podium with an ambitious plan. The plan was organised around a large inner courtyard. This proposal was not realised, but it was constructed on a reduced scale in a modified version.[11] In the final design Fathy maintained the main concept of the preliminary design except for the inner courtyard, which was altered to an exterior one to face the Fayum Lake (ill. 35). In order to retain the separation between public and private spaces, Fathy arranged the spaces along two sides of the courtyard. Probably the alteration occurred because the site enjoys a magnificent view of the lake.

There is a clear similarity between the plan of the Kallini house (1945) and the preliminary plan of the Hamdi Seif Al-Nasr house. The plan of the Kallini house, which is somewhat confusingly, labelled Nasr, is a clear indication of Fathy's intention to reuse the preliminary plan of the Al-Nasr house. Fathy altered certain parts of the plan, such as the family spaces and the public entry sequence, to produce one of his most resolved designs.[12] Unlike the Said house and the Hamdi Seif Al-Nasr house, the plan of the Kallini house is organised around two courtyards, a formal courtyard and a service courtyard (ill. 37). On two sides of the formal courtyard the public and family spaces are arranged and overlook the courtyard through a large *māshrābīyyāh* and an arcaded corridor respectively.

9 Steele, 1997, p. 58.
10 Ibid., p. 45.
11 Steele, 1989, p. 16.
12 Ibid., p. 31.

Fathy's concern in the design of the Kallini house was to achieve the self-contained quality of the courtyard, which evolved over time as a peaceful place shut-off from the outside world. Steele believes that of all Fathy's projects, the Kallini house is one of the best examples that express the *sakina*. In an interview with Steele in 1986 in Cairo, Fathy used the word *sakina* to describe the quality he sought in the courtyards. The word *sakina* comes from the word *sakan*, which is the Arabic name for a house and relates to peace and purity. Fathy explained that the

> word *sakina* means peaceful and holy, while the word *harim* which means woman and is related to the wor[d] *haram*, meaning sacred, denote the family living quarters within. This peace and holiness, this feminine inwardness, this atmosphere of a house for which 'domesticity' is so inadequate a description, is so fragile that the least little rupture in the frail walls that guard it allow it to escape.[13]

Parallels between Fathy's early houses and the early work of Luis Barragán's (1902-1988) in the 1930s and 1940s are hard to avoid. Both drew on the vernacular architecture of their countries as well as on the same elements of Islamic architecture. Like Fathy, Barragán was interested and captivated by the culture of the countryside and the peasant dwellings with their courtyards and gardens. Barragán's work was also shaped and influenced by Islamic architecture after his visit to the Alhambra in Spain.

> I saw many types of Arab-style houses... houses with patios, of great delight, bright on the inside and sophisticated on the outside, conducive to a life like the one we had in the country... the base and the position are similar to that of our houses.[14]

The Egyptian vernacular building traditions in Upper Egypt in general and in Fathy's work in particular was a source of inspiration to the American firm, Esherick, Homsey, Dodge & Davis. Around 1978 the American firm was commissioned by the Brooklyn Museum in New York to build a residential compound for the excavations of the Brooklyn Museum's Theban Expedition at the precinct of the Goddes Mut, Luxor (ill. 165). The compound consists of several courtyards, each surrounded by living and working spaces. Like the Said house, the project is characterised by retention of the

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13 Steele, 1997, p. 39.

14 Antonio Riggen Martínez, *Luis Barragán: Mexico's Modern Master, 1902–1988*. New York, 1996, p. 38.

existing vegetation within the courtyards and orientation to suit the climate.[15] The American firm succeeded in creating a design comparable to Fathy's works in terms of dealing with the specific climate of Upper Egypt.

This factor is what the British Arts and Crafts architect CFA Voysey (1857-1941) failed to spot in his design for the Leigh Canney house, Aswan in 1905 (ill. 166). In his book *CFA Voysey*, Stuart Durant argued that "it remains a mystery as to how Voysey acquired this unusual commission".[16] There is no evidence that Voysey visited Egypt and this suggests that his knowledge about the components of the traditional houses and the climate of the region was limited. His response to the climate consisted of one and a half storey high living rooms, but the terraces on two sides of the ground floor and the outside walls were not protected from the sun. Unlike Fathy, Voysey did not employ a courtyard and this suggests that he did not understand what was required when building a house in a hot climate.

The concept of the spatial theme and the use of inner courtyards is a constant element in Fathy's work. It can be realised in the form of the central hall of the Monasterli house (1950), which continues vertically in section to include the first floor and the roof (ill. 73). On the ground floor the hall is covered with a magnificent, ornate, plaster-work dome. The apex of this dome is used as a fountain in the open first-floor courtyard, which serves as a focus for more private living and represents one of the most delightful interior spaces in Fathy's houses. The fountain is mirrored in a sculptural dome-like lattice pergola above, which lights the spaces around the courtyard (ill. 74).[17] Here, Fathy used this pergola, the origin of which goes back to the Ottoman period, for the first time. Later it was employed in many of the architect's houses, including the Nassif house (1974) and the Al-Sabah house (1978), indicating Fathy's nostalgic feeling for this form.[18] El-Wakil also employed a similar wooden pergola as a focal architectural element in the Sulaiman palace (1975) (ill. 131). In fact the influence of Fathy upon El-Wakil was obvious even in the smallest details.

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15 [Expedition House for the Excavations of the Brooklyn Museum Theban Expedition at the Precinct of the Goddess Mut, Karnak-Luxor, Egypt]. *Progressive Architecture*, January 1979, p. 70.
16 Stuart Durant, *CFA Voysey*. London, 1992, p. 87.
17 Steele, 1997, p. 193.
18 Steele, 1989, p. 20.

In the Al-Dariya model-house (1966), Fathy paid more attention to the courtyard (ill. 108). He prepared several diagrams of the sun-path angles for various times of the day and year in this area. These diagrams allowed him to define the appropriate orientation, length and width of the courtyard in order to be sure that shadow would project onto the open courtyard and other parts of the house. It also enabled him to raise or lower some parts of the house to benefit from the sun and shadows. He also slightly lowered the level of the courtyard to avoid the seeping of rain water into the rooms (ill. 109).[19] In designing the courtyard Fathy preserved its traditional function and improved the arrangements of the rooms surrounding it, in order to achieve the separation between family spaces and guests spaces.[20] Steele believes that Fathy's model-plan is "an ingenious lesson in the separation of public and private areas".[21]

In later works, Fathy employed two courtyards to gain more privacy. In his own house (1971) the service area, including a domed bathroom and vaulted kitchen, overlooks a small courtyard in the rear of the house (ill. 121). This courtyard has a separate entrance and a staircase leading up to the roof, where one can take advantage of the view and the breeze from the sea.[22] In addition, the main reception area overlooks another courtyard with sitting area and a fountain in the middle through a wide *māshrābīyyāh* window which frames a wonderful view of the sea. Over several years, from 1971 to the end of his life, Fathy carefully continued to change and add to the house. For example, the two archways of the open courtyard facing the sea which were originally open and are now filled with claustrawork, may have been changed to achieve greater privacy and security (ill. 120). Fathy's house may in no sense be thought of as simply another regional vernacular house; in fact it shows that he was aware of the design potential in which the internal organisation and external form relate convincingly to each other and to the site.

Fathy applied the same concept of both the main and service courtyard in the Kazerouni house (1979) (ill. 145). Other houses of the late period included two courtyards such as the V.I.P. house (1974) (ill. 127), the Murad Greiss house (1980) (ill. 147) and the Hassan Rashad house (1986) (ill. 159). Unlike Fathy's own house and the Kazerouni

19 Steele, 1997, p. 128.
20 Fathy, Model Houses for El Dareeya. *Ekistics*, March 21, 1966, p. 216.
21 Steele, 1997, p. 128.
22 Ms., FAAUC, no. 193. p. 2.

house, the two courtyards of the V.I.P. house are main ones. The one-floor house consisted of two main parts; the men's reception quarter and the family quarter similar to that of the traditional Arab house. Each part has a courtyard around which all its own spaces are arranged. To obtain more privacy, the family quarter contains an entrance from the courtyard.[23] In several large scale projects such as the Sadat resthouse (1981) (ill. 155), the Al-Sabah house (1984) (ill. 137) and the Khalil Al-Talhuni house (1988) (ill. 161), Fathy employed more than two courtyards.

One of the few houses, which did not contain a courtyard is the Andrioli house (1984) (ill. 157). Because the owner had some professional experience, he interfered in the design process and refused to allow the inclusion of a main courtyard, except the one that serves as a garage and an entrance to the kitchen. In an interview, the new owner, Dr Basil Diab, confirmed that he bought the house because its spaces are well arranged and proportioned, but believed that Andrioli was wrong when he refused to include a courtyard in the house. Consequently, Diab is working to enlarge the entrance-court, which faces south, to create a courtyard where he can sit with his family and enjoy the sun during winter time. "I believe that the courtyard is now the best place in the house".[24] The courtyard also represented a major component of Fathy's public work including schools and mosques. In the Fares School (1957) Fathy organised the functional spaces around a playground courtyard enclosed on three sides and enlivened with a fountain (ill. 82). Similarly, in the Luxor Cultural Centre (1970), the lecture rooms and exhibition hall were arranged around a courtyard on three sides (ill. 115). In Al-Wehda mosque (1974), Fathy situated arcades along the street side followed by a large courtyard which guaranteed a complete separation between the noise of the street and the main prayer hall.

The *Qā'āh* and the *Mālqāf*

In the early Arab houses the courtyard also represented an intermediary space between the entrance and the guest area. Meeting casual male visitors, who are not relatives, always took place in the *tākhtābūsh*, a room with a side open to the courtyard. On the

23 Ms., FAAUC, no. 186, pp. 4-6.
24 Author's interview with Dr Basil Diab, 2000.

other hand, important male visitors would enter indirectly from the courtyard to another large reception hall with a lofty central space, which was flanked by two spaces at a slightly higher level.[25] In the Mamluk period in the twelfth century, a change in the style of the house took place that involved the covering of the courtyard, and the introduction of the *qā'āh* as the main reception hall in the house. The *qā'āh* consisted of the *dūrqā'āh* (a central part of the *qā'āh* with a high ceiling covered by the *shūkhshākhāh* (wooden lantern on the top)) and two *'ıwāns* (sitting areas) at a higher level on both the north and south sides. The lantern is provided with openings to allow the hot air to escape. Its shape could be square, octagonal, or hexagonal. It was also flat on the top, in order to help the upper layer of air to be heated up through exposure to the sun. Fathy was influenced by the twelfth century *qā'āh* at Ad-Dardir house, which clearly represented this change of style.[26] With the covered courtyard, a new system of ventilation was invented to achieve thermal comfort inside the *qā'āh*. This was the *mālqāf* (a wind catch). The *mālqāf* is a shaft rising high above the building with an opening facing the prevailing wind and constructed on the north *'ıwān* (figs. 4, 5). It traps the cool air "like sails capturing the wind" and channels it down into the interior of the building.[27]

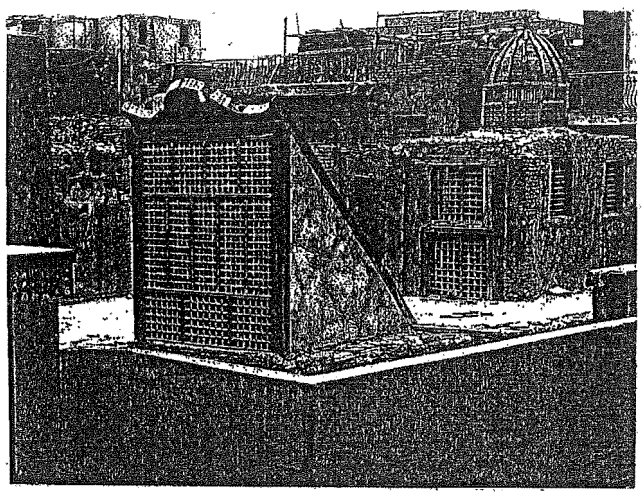

Fig. 4. A *mālqāf*: medieval Cairo house.

(Source, Steele, 1997)

25 Miles Danby, Privacy as a Culturally Related Factor in Built Form, in Farmer, 1993, p. 139.
26 Abdel-Mohsen Saleh Mito, Hassan Fathy and Balkrishna Doshi: Two Regional Architects in the Context of Modern Architecture. Thesis (Ph.D.) - University of Georgia, 1990, pp. 86, 104.
27 Fathy, 1986, p. 57.

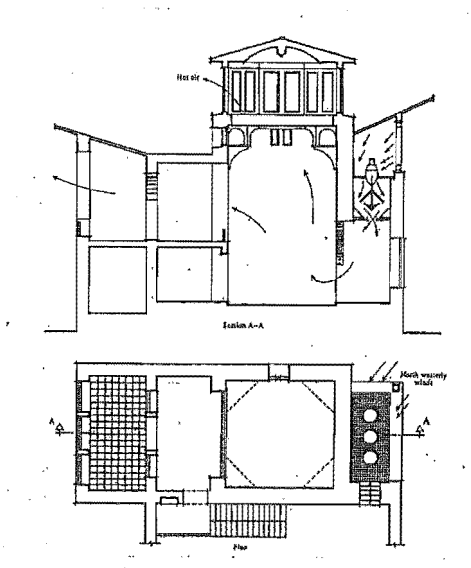

Fig. 5. A schematic diagram of a *mālqāf* with wetted baffles and a wind-escape Designed by Hassan Fathy. (Source: Fathy, 1986)

To increase the humidity of the air coming from the *mālqāf*, the *sālsābīl* was also introduced (fig. 6). It is a marble plate, decorated with wavy patterns and provided with a source of water. The *sālsābīl* was put against the wall of the opposite side of the *'wān* and placed at an angle to allow the water to trickle over the surface.[28] The idea of the *mālqāf* dates back to the early Pharaonic periods. Examples can be found in the Eighteenth Dynasty houses of Tal Al-Amarna. Fathy was influenced by the Pharaonic house of Neb-Amun, which was depicted on his tomb of the Nineteenth Dynasty (1300 BC.) (fig. 7). It shows a *mālqāf* with two openings, one facing windward to capture the cool air and the other facing leeward in order to evacuate the hot air by suction. The size of a *mālqāf* is determined by the external air temperature. If the air temperature is high, a smaller size is required and if it is low, a larger size is preferred.[29]

28 Ibid., p. 67.
29 Fathy, 1986, pp. 58-59.

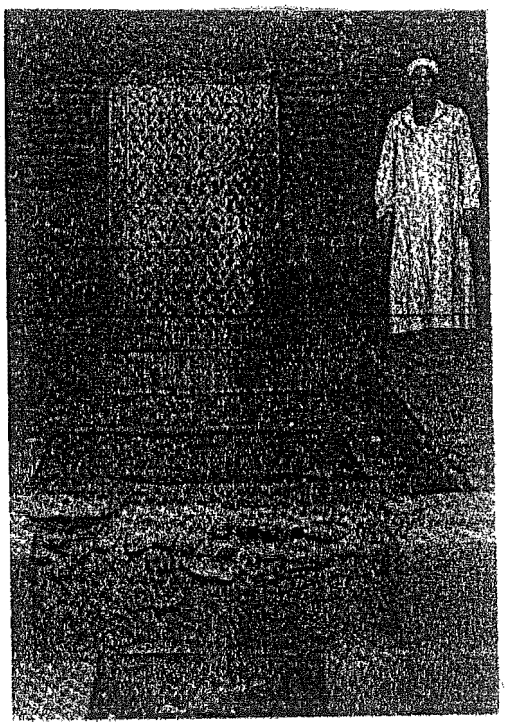

Fig. 6. A *Sālsābīl*: medieval Cairo house.
(Source: Fathy, 1986)

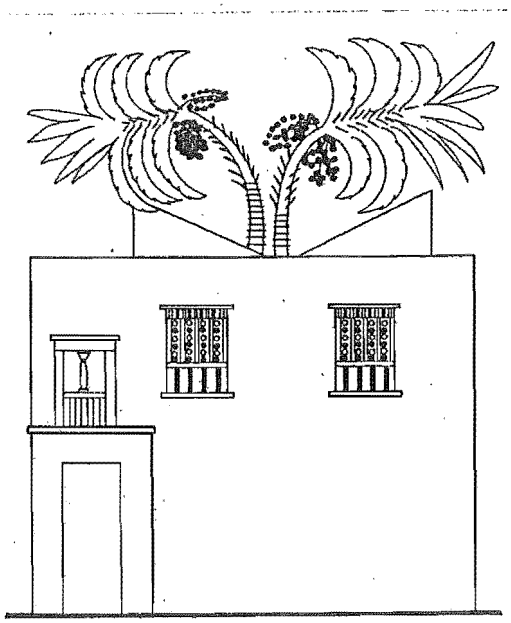

Fig. 7. A *Mālqāf*: Neb-Amun house (c. 1300 B.C.)
(Source: Fathy, 1986)

However, this new system of ventilation combined the *mālqāf*, the *sālsābīl* and the lantern in one design to assure a good circulation of cool air in the *qā'āh*. Fathy was inspired by the fourteenth century Muhib Ad-Din Ash-Shaf'i Al-Muwaqqi house in Cairo which best illustrated this combination (fig. 8). Fathy employed the *qā'āh* and the *mālqāf* extensively in his designs. To retain the architectural character of the mud-brick houses, Fathy replaced the wooden lantern by the dome, except for a few houses, including the Mehrez apartment (1967) and the Nassif house (1974) (fig. 9). Fathy used the wooden lantern in the Nassif house because it was more appropriate to the character of the region than the dome. Another unique element is the *bādgār* (a specific type of *mālqāf*). Unlike the wind-catch with one-side open towards the prevailing wind, the *bādjār* is a four-sided structure closed with shutters similar to that used in Oman, Iraq

and Iran (fig. 10). Nassif invented a gadget to open any of the four shutters to the wind direction by a handle. The wind would flow down through the house and be cooled by contact with the water in bowls inset in the *bādjār*'s sides, instead of flowing over a *sālsābīl*.[30]

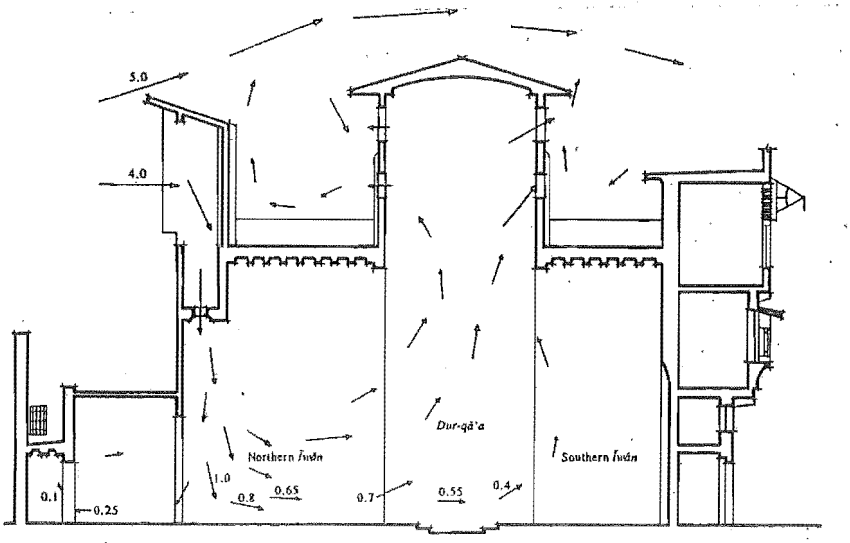

Fig. 8. The *mālqāf* and the central location of the *qā'āh* of Muhib Ad-Din Ash-Shaf'i Al-Muwaqqi house, Cairo (c. 1350). (Source: Fathy, 1986)

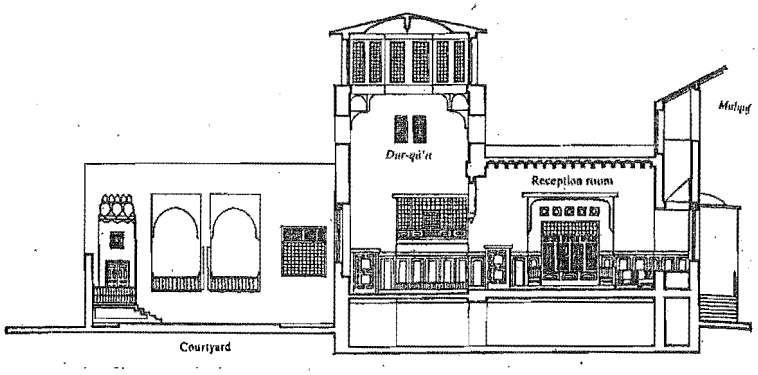

Fig. 9. The combination of *mālqāf* and *qā'āh* in the Nassif house, Jeddah, 1974. (Source: Fathy, 1986)

30 Alkhateeb, *Saudi Gazette*, 20 September 1979, p. 5.

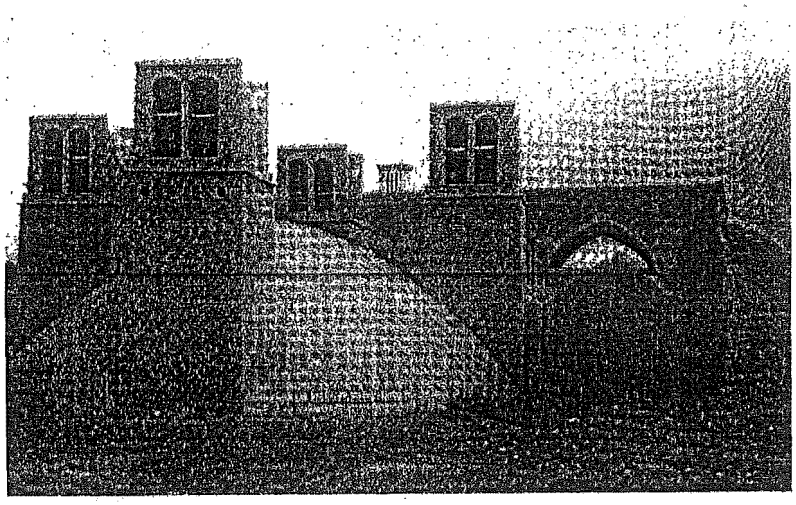

Fig. 10. A *bādjār* structure, Yazd, Iran.

(Source: Fathy, 1986)

Fathy employed the *mālqāf* and the *qā'āh* for the first time in the Taher Al-Emari house (1937) and during the 1940s they became a constant feature of almost all his work. A more developed central *qā'āh* was employed in the Takla Pasha resthouse (1941), the Al-Razik house (1941) and the Izbit Al-Basri prototype house (1942). While in the Hamid Said house, the domed *qā'āh* was connected to only one vaulted *'īwān*, used as a bed-alcove (ill. 26), the *qā'āh* of the Hamdi Seif Al-Nasr house consisted of a central *dūrqā'āh* covered by a dome and flanked by two vaulted-recesses used as sitting and dining areas (ill. 35). The *qā'āh* of the Hamdi Seif Al-Nasr house is large and provided with a deep window overlooking the courtyard and offers a magnificent view to the lake. To take advantage of the prevailing wind, Fathy employed a *mālqāf* above the reception area. Unfortunately, during the construction process the owner converted the *mālqāf* into a stairway leading to the roof (ill. 36). Unlike the Hamdi Seif Al-Nasr house, Fathy was not able to place the *mālqāf* in direct sequence with the formal courtyard in the Kallini house (1945) because of the direction of the prevailing wind.

Instead he situated it directly above the main *'īwān* to bring the cool air into the reception area.[31]

Fathy continued to favour a large scale in the formal reception space. The double-height space over the central part of the *qā'āh* created the kind of dynamics and the sense of verticality that Fathy often achieved in his houses. Like the Hamdi Seif Al-Nasr house, this sense of verticality was in evidence in Fathy's own house (1971). Here, the ceiling of the central part of the *qā'āh* soars high and is covered by the main dome. The space under the dome was left free so that it would create a feeling of dignity. Fathy explained that in this space when "one looks up he sees the dome representing the sky, to withdraw to the '*'īwāns*' is to find privacy. Thus the ensemble conveys at one time a feeling of grandeur and intimacy". Like the Said house, Fathy employed the vaulted *'īwāns* as sleeping alcoves on a slightly raised level.[32]

In the Al-Dariya model-house (1966), Fathy sensitively situated the *qā'āh* close to both the entrance and the kitchen to achieve its separation from the other parts of the house. He also introduced a new system of *mālqāf*, situated on one wall of the *qā'āh* and directed it towards the damp northerly wind. Instead of using a dome or a lantern, Fathy made openings in the opposite wall, with suitable dimensions and heights to facilitate the circulation of the cooling air from the *mālqāf* by the process of evaporation. This system decreased the inner temperature by seven degrees.[33]

The combination of the *qā'āh* and *mālqāf* was also employed in the Fares School on a small scale. Because of the high cost of mechanical cooling, the school was designed to be naturally ventilated. However, Fathy provided each classroom with an elaborately detailed ventilation system, which was designed according to the principles of the wind-catch, *qā'āh* and the *sālsābīl* to keep the classroom cool in the summer. To realise this

31 Steele, 1997, p. 38.
32 Ms., FAAUC, no. 193, p. 2.
33 Fathy, *Ekistics*, March 21, 1966, p. 216.

system, each classroom consisted of a square domed area, which represented the *qā'āh*, to be used as the main sitting area, and a rectilinear vaulted space next to it (ill. 83). The vaulted space was intended to contain a water-basin in order to cool the air coming in through slots in the vault above it. Further ventilation was also supposed to be provided by operable casement windows which were paired with a circular opening intended to provide light. The domed and vaulted areas were executed as Fathy intended but unfortunately, the water-basin was not provided in order to use its space as an extra sitting area for the children. Despite these internal modifications, the classrooms, which are still in use, are environmentally comfortable. The clear differentiation between the openings intended for light and the air slots high in the vaults give the space of the classroom added character.[34]

In the design of the High Institute of Social Anthropology and Folk Art (1965), Fathy included an impressive replica of the *qā'āh* of the most famous houses of medieval Cairo, such as Gamal Ad-din Al-Zahaby, Al-Souheimi, Zeinab Khaton and Muhib Ad-Din Ash-Shaf'i Al-Muwaqqi (ill. 106).[35] In other public buildings such as the Luxor Cultural Center (1970), Fathy used the wind-catch system to ventilate the theatre in an ingenious way. He built two large wind-catches; one over the stage of the theatre with its opening towards the prevailing wind to bring in cool air and another behind the grandstands with its opening against the wind to allow the hot air to escape (ill. 114).[36] Unfortunately, only the enclosed theatre of the whole project was completed, and the natural ventilation system was ignored. Although the two large wind-catches were built and dominate the facades of the theatre, they are not working.[37]

The *Tākhtābūsh*

In the vernacular architecture of the Arab house the concept of the courtyard has also been developed to ensure a steady flow of air by convection by including the *tākhtābūsh*, a type of loggia. It is a covered outdoor sitting area, located between two

34 Steele, 1989, p. 23.
35 Drawings of the High Institute of Social Anthropology and Folk Art, including plans, elevations and sections. FAAUC.
36 Ms., FAAUC, no. 207, pp. 9-10.
37 Author's visit to the Luxor Cultural Centre, 2000.

courtyards; one is an unshaded, large paved-courtyard and the other is planted. The *tākhtābūsh* has one side opening completely onto the paved-courtyard and through *māshrābīyyāh* onto the back garden. Air heats up more readily in the unshaded courtyard than in the back garden creating an area of low air pressure. However, the heated air rising in the courtyard draws cool air from the back garden of the *tākhtābūsh*, creating a cool draft. Fathy was influenced by the *tākhtābūsh* found in the medieval Cairo houses, such as Al-Suhaymi house and the *Qā'āh* of Muhib Ad-Din Ash-Shaf'i Al-Muwaqqi (fig. 11). A similar arrangement can also be found in the tablinum of the ancient Roman villas of Pompeii.[38]

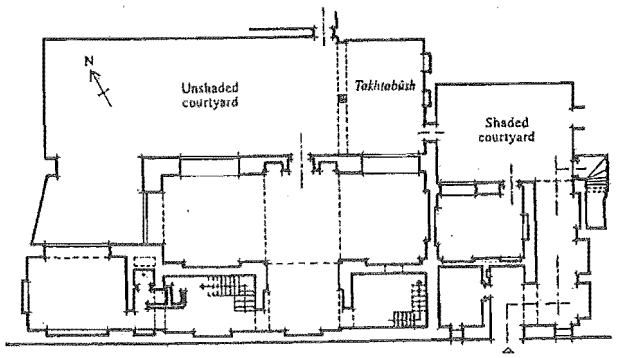

Fig. 11. A *Tākhtābūsh*: Muhib Ad-Din Ash-Shaf'I Al-Muwaqqi house (c. 1350).

(Source: Fathy, 1986)

Fathy used the *tākhtābūsh* in many of his late houses. In his unbuilt villa for the ambassador of Nigeria (1960), Fathy did not employ the *tākhtābūsh* in its normal form, but he applied its environmental principles to achieve natural ventilation to all its parts. Ingeniously, Fathy arranged each wing in the house to be located between two courtyards to ensure cool air flow through the wing (ill. 93). Like the Ambassador villa, the Shri Zahir Ahmed villa (1963) in India exhibited the same way of generating air flow through its parts (fig. 1). In the Prince Sadruddin Aga Khan house (1970), Fathy

38 Fathy, 1986, pp. 63-64.

situated the *tākhtābūsh* at the end of a small garden, not only to enjoy the cool breeze, but also to frame views toward the west bank of the Nile River (ill. 117). Other houses exhibited the *tākhtābūsh* including the Akil Sami house (1978), but the most representative application of the principles and form of the *tākhtābūsh* can be found in the Murad Greiss house (1980).[39] One can go from the main sitting area in the house through into a double-domed *tākhtābūsh*, situated between a small garden and a large paved courtyard which also contained a swimming pool (ill. 147). A stream of cool air was created between them through two pointed-arches, which are filled in with claustra-work.

The *tākhtābūsh* also appeared in some of Fathy's public buildings, such as the Luxor Cultural Centre. The site plan consisted of three main sections; the public section, the activities section and the cinema and theatre section. Because of the hot-dry climate of Luxor, Fathy grouped these sections around several courtyards and small gardens in order to retain the cool air during night and regulate air movements through the spaces (ill. 115).[40] He deliberately positioned each section between two courtyards to benefit from the aerodynamic principles of the *tākhtābūsh*.[41]

The *māshrābīyyāh*

The *māshrābīyyāh* was another important device which Fathy used to cover openings as well as to achieve thermal comfort and privacy in a house (fig. 12). Its name is originally derived from the Arabic word 'drink' and referred to 'a drinking place'. This was a cantilevered space covered with a lattice opening, where water jars were placed to be cooled by the evaporation effect as air moved through the opening. The form and function of the *māshrābīyyāh* has changed to become a wooden lattice screen. It is composed of small wooden circular balusters, arranged at specific regular intervals, in a decorative and intricate geometric pattern (fig. 13). The *māshrābīyyāh* has five functions

39 Steele, 1997, pp. 195, 198, 200-201.
40 Ms., FAAUC, no. 207, pp. 4-5.
41 Ibid., pp. 7-8.

and its design may fulfil some or all of these functions. These are; controlling the passage of light, controlling the air flow, reducing the temperature of the air current, increasing the humidity of the air current and ensuring privacy. To control the amount of light and air and to graduate the contrast between shade and light, the size of the interstices and the diameter of the balusters are adjusted.[42]

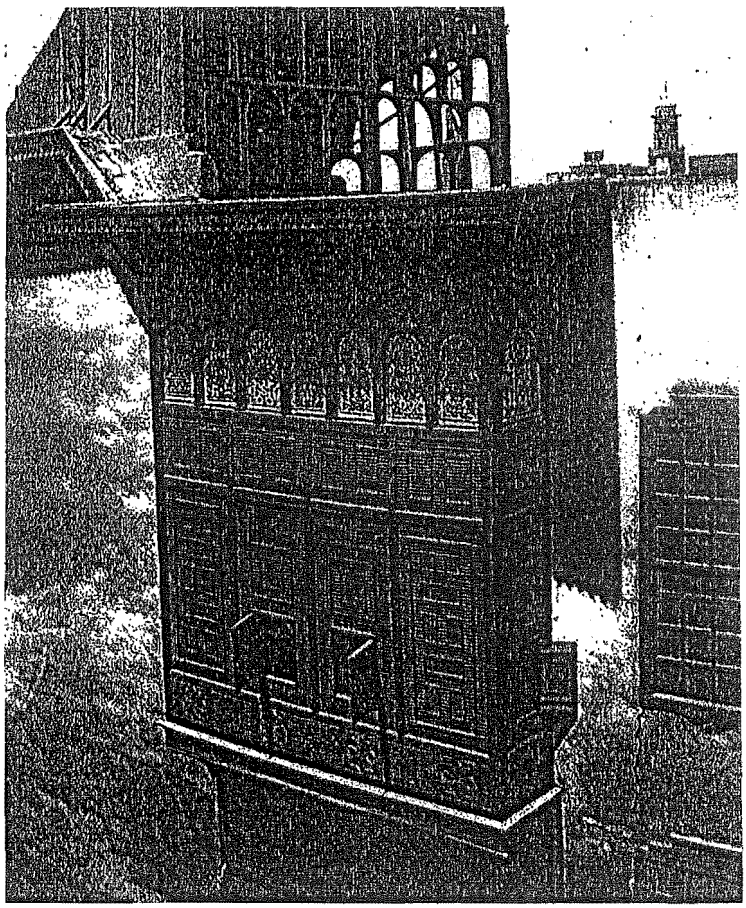

Fig. 12. A *māshrābīyyāh* and a *mālqāf* above, medieval Cairo.

(Source: Steele, 1997)

42 Fathy, 1986, pp. 46-47.

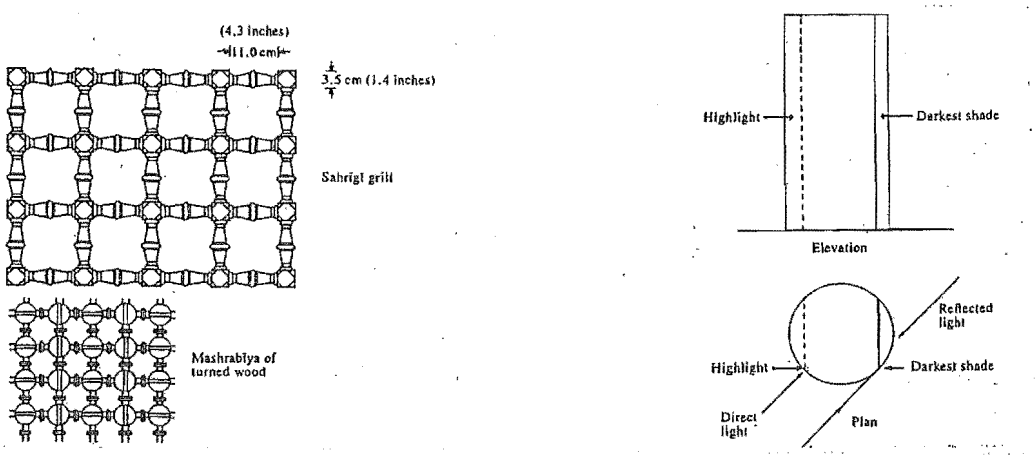

Fig. 13. Examples of lattice arrangements and analysis of light falling on a *māshrābīyyāh*

(Source: Fathy, 1986)

Fathy used the *māshrābīyyāh* extensively in his houses either to cover openings on the facades or openings overlooking the inner courtyards. For the first time, Fathy incorporated the *māshrābīyyāh* in a blank wall in the Isabel Garvice house (1937) (ill. 11) and in the following year in the Zaynab Hanem Hishmat house. In the Kallini house (1945), the reception area is provided with a large two-storey window covered with a large wooden *māshrābīyyāh*, which overlooks the open courtyard (ill. 39). This large-scale window is reminiscent of those found on medieval houses in Cairo, such as Manzil Al-Sinnari and Bayt Al-Suhaymi, which Fathy admired.[43] Like the Kallini house, the central courtyard of the Nassif house (1974) is characterised by a half moon stained glass-window at the top of one wall with a lower level of stained glass, shielded with a *māshrābīyyāh*.

The Nasser Al-Sabah house (1978) is characterised by a well-massed handling of form with the accompanying details of the *māshrābīyyāh* windows and the clustrawork. The main reception gallery for men is covered by a flat roof supported by two high pointed

43 Steele, 1997, p. 38.

arches. The arches rest on thick buttresses which project into the facade to reflect its function (ill. 138). Between the buttresses Fathy put three long narrow windows covered with *māshrābīyyāh* screens to admit light into the gallery. Above them and under the ceiling there are another three windows to allow hot air to escape and ensure natural ventilation. There is also a private living room that overlooks the formal courtyard through a projecting *māshrābīyyāh* screen. Fathy also employed the *māshrābīyyāh* extensively in the Alpha Bianca house (1979). All rooms overlook the interior courtyard through wide wooden *māshrābīyyāhs*, while the exterior windows were smaller (ill. 139). His design creates an asymmetrical composition in which there is a free arrangement of elements which combine to produce a compositional focus which is practically in the middle of the plan. In this case the central focus is the wide *māshrābīyyāh* window of the dinning room which dominates the view from the inner terraced courtyard.

The Kazerouni house (1979), which is known as "*Mit Rehan*", meaning "the way of the basil", also exhibited Fathy's ability in handling the use of *māshrābīyyāhs* outside and inside the house. The ground floor is L-shaped in plan, enclosing an internal courtyard along the east and south sides (ill. 145). The north side of the courtyard comprises a domed loggia to catch the breeze as well as to provide shade during the summer, while a limestone wall containing three pointed-arch *māshrābīyyāh* windows closes the west side (ill. 142). The courtyard's *māshrābīyyāh* windows overlook large gardens, trees and a vegetable patch. One of the distinctive features of the ground floor is the reception area which overlooks the surrounding house-garden and the interior courtyard through pointed-arch windows covered by *māshrābīyyāhs* and stained glass (ill. 143). The sitting area in the first floor overlooks the main entrance through a large *māshrābīyyāh* window which provides a focal point to the house (ill. 144). Although Fathy used a limited number of building materials, a subtle relationship was established between the limestone blocks and the wooden *māshrābīyyāh* windows, latticework and balustrades.

During the 1980s Fathy continued to employ *māshrābīyyāhs* in his houses including the Murad Greiss house (1980), the Sadat resthouse (1981), the Andrioli house (1984) and the Hassan Rashad house (1986). The central space of the reception area of the Murad Greiss house is covered with a large shallow dome and overlooks a big paved courtyard through an outstanding bubble-shaped, wooden *māshrābīyyāh* window. Both the master bedroom and the living area also overlook the garden-courtyard through *māshrābīyyāh* windows. Like the Murad Greiss house, the reception area in the Sadat resthouse has also a large opening covered by a *māshrābīyyāh* screen overlooking an inner courtyard with fountain in the middle.

Although Fathy experienced alterations in some of his designs during the construction process by the owners, one of the major alterations which affected the appearance of the Andrioli house was the use of blue-coloured shutters instead of the specified *māshrābīyyāh* screens (ill. 156). According to Nawal Hassan, Andrioli had some prefabricated windows and doors, probably leftover from his work, and he wanted to exploit them in his own house to reduce the cost.[44] Andrioli was not aware of the role these *māshrābīyyāhs* play against the mass and did not consider the proportion of the openings and the relationship between solids and voids. However, he broke one of the important elements which provide unity in the composition of plural elements. In 1997 Andrioli sold the house to Dr Basil Diab, who decided to keep the shutters. Diab believed that although these blue-coloured shutters are inauthentic, they are closer to the character of the surrounding houses than the *māshrābīyyāhs*.[45]

Building materials

Building a house requires an encounter with a material whose properties demand the recognition of architectonic law, and an aesthetic tradition that dictates its style. Taking the building material as a major criterion highlights the variations caused by climatic constraints. Throughout his career Fathy used different types of local building materials

44 Author's interview with Dr Nawal Hassan, 2000.
45 Author's interview with Basil Diab, 2000.

in constructing his buildings and villages. He built about twenty-two mud-brick houses, one sand-brick house and eight limestone houses. He also built three villages with mud-brick. Fathy's main intention in using these natural materials was not to revive the architecture of the past, but to use materials that were appropriate to the culture, the economy and the specific climate of the region. Fathy believed that the

> architect puts his building in two environments; the one is God made i.e. the landscape with its materials, configuration, fauna, flora and climate and the other is man-made; the urban. If he does not respect the first, it would be a sin... and if the architect did not respect the other, it would be lack of civility towards the fathers.[46]

Fathy's idea of using mud-brick in construction evolved when he was first inspired by the mud-brick houses of the peasants in his father's farm in the early 1930s.

> Here, for years, for centuries, the peasant had been wisely and quietly exploring the obvious building material, while we, with our modern school-learned ideas, never dreamed of using such a ludicrous substance as mud for so serious a creation as a house.[47]

The Nubian villages were another influence on Fathy. Their houses were built of mud-bricks as well as decorated with claustrawork, moldings and tracery in mud. The ancient mud-brick buildings and monuments of Egypt also confirmed for Fathy that this traditional material was "more than fit for use by modern architects, and that the solution to Egypt's housing problem lay in Egypt's history".[48]

For Fathy mud-brick is not only cheap but also beautiful and led to the creation of buildings of human scale, which have an unselfconscious aesthetic impact. The structure of mud-brick houses "dictates the shapes and the material imposes the scale, every line respects the distribution of stresses, and the building takes on a satisfying and natural shape". Fathy argued that the limits imposed by the resistance of mud-brick and the laws of statics help the architect to shape space and "to enclose a volume of chaotic air and to bring it down to order and meaning to the scale of man".[49]

Ironically, Fathy's realization of the importance, for Egyptian architecture, of local

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46 Ms., FAAUC, no. 186, p. 4.
47 Fathy, 1973, p. 4.
48 Ibid., pp. 6-7. See also Chapter 1, p. 33.
49 Ibid., 1973, p. 11.

building materials and methods of construction was anticipated in the early twentieth century by the English architect, Ernest Richmond. Prior to 1910, Richmond conducted research in Egypt for four years into indigenous building materials and methods of construction. The research was sponsored by the Royal Institute of British Architects (RIBA) and the Egyptian Government. Like Fathy, Richmond was impressed by the ancient buildings and mediaeval monuments of Egypt and recommended that a thorough investigation should be made "to see how the difficulties have been met in the past, and to what extent and in what manner they are overcome by the modern native and European builder".[50] Richmond explained that if the architect considered the principles which local materials and methods of construction embody, he would be able to introduce them in a way appropriate to fulfil the requirements of modern life.[51] Like Fathy, Richmond recognised that a building made of sun-dried brick and mud mortar is a homogeneous structure and becomes "a single mass with nearly equal powers of resistance throughout".[52] Richmond believed that his study might provide some facts about the traditional practice but it did not "provide an explanation as to why buildings which present every sign of decay and dilapidation do not collapse more often".[53]

The results of Richmond's research were presented to members of the RIBA and subsequently published in the *RIBA Journal* in 1910. The research showed that the Egyptian craftsmen were still alive and the tradition remained in many of their crafts. However, constructing buildings for Europeans by native workmen was difficult because they did not understand the conditions under which Europeans lived as well as using building materials and methods of construction which they were not familiar with. In the discussion which followed Richmond's lecture, the prominent Arts and Crafts architect, R. Weir Schultz argued that, not only craftsmen in Egypt suffered from using new building methods, but also in England it happened very often. Richmond's research seems to have had an influence in Egypt at the time. E. Guy Dawber, Vice-President of the RIBA reported that there was a desire to establish a Department for Technical Education in Egypt, and they were looking for a good man, who would be able to teach

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50 Ernest Richmond, Building Methods in Egypt. *RIBA Journal*, v. xviii, November 1910 - October 1911, p. 535.
51 Ibid., p. 533.
52 Ibid., p. 537.
53 Ibid., p. 546.

Egyptians to become craftsmen. Ironically, "they did not get some one in the country who had knowledge of the native methods, and who would try to perpetuate the good points about the old traditions".[54] There is no evidence that Fathy knew about Richmond's research but this early attempt to revive traditional building methods is reminiscent of Fathy's efforts to establish his Institute for Appropriate Technology in the 1970s.[55]

The climate of Egypt was another crucial factor, which Fathy considered, in defining mud-brick as a building material for constructing his houses. Architects have often created their architecture in response to specific climatic conditions. They usually design the building details in a way to suit the particular character of the local climate. Rapoport explained that the main purpose of a house is to shelter and protect its occupants "from animal and human enemies and those natural forces known as the weather".[56] Egypt is an arid zone, with a large diurnal temperature range. During the day all surfaces are exposed to direct sunshine and receive a great amount of heat but they lose this heat during the night. Fathy realised that a desirable comfort level inside a house in Upper Egypt is governed by two important factors. First, a material for wall and roof that does not conduct heat needs to be found and second, close attention must be paid to air movement and ventilation of houses.[57] Fathy found that sun-dried, earth brick is the poorest conductor of heat, (0.22 calories/minute/cm^2/unit thickness), compared with (0.48) baked bricks and (0.8) hollow concrete blocks. However to overcome the weakness of mud brick Fathy suggested thick walls which would also help to keep the houses remarkably cool during the day.[58]

Fathy's philosophy was that there should not be any difference between a landowner's house and a peasant's house; he decided to build both of mud brick. The first recorded project constructed of mud-brick was the Royal Society of Agriculture Farm, Bahtim in 1941 (ill. 18). In 1942 Fathy built the Said house (ill. 25), whose owner always referred to him as a master builder and described his mud-brick architecture as "pottery and

54 Ibid., p. 547.
55 See Chapter 4, pp. 97-99.
56 Amos Rapoport, *House Form and Culture*. London, 1969, p. 85.
57 Fathy, 1973, p. 46.
58 Ibid., 1973, pp. 45-46.

building at the same time".[59] Many other houses of Fathy's early career were constructed of mud-brick including the Ezbet El-Basri model-house (1942) (ill. 30) and the Chilean Nitrate company rest houses (1942). To give an appearance of added strength to his mud-brick houses, Fathy built buttresses to support the outer walls in some houses, including the Al-Nasr house (1945) (ill. 34) and the Stopplaere house (1950) (ill. 69). The façades of these houses are characterised by the sloping buttress, which is an extension to the internal bisecting wall. It also expresses externally the physical separation between the parts of the building. Fathy's use of buttresses is reminiscent of the work of CFA Voysey. Voysey's large houses in rural settings, such as the Perrycroft (1893) in the Malvern Hills, featured sloping buttresses (ill. 167). Like Fathy, Voysey employed buttresses not only for structural reasons but also to link the building to the ground and to express continuity with local vernacular design.[60]

In his late career Fathy also tried to continue using mud-brick as a building material. One of the important projects which Fathy carried out with mud-brick was the Al-Dariya model-house in Saudi Arabia (1966). Fathy was influenced by the Al-Saud family house, Dariya, as an example of the mud-architecture of Najd.[61] He preferred to use mud-brick to modern materials in constructing his model-house. Fathy believed that "improved building materials do not necessarily entail improvements in the dwelling; on the contrary, they may lead to an economic problem which deprives the low income people from obtaining a house of sufficient size".[62]

Although Fathy's model-house was destroyed and the village was never built, his philosophy of using mud-brick attracted the attention of other concerned people. In 1986 El-Wakil pointed out Fathy's experiment in Al-Dariya to Prince Sultan ibn Salman Al-Sa'ud. Prince Sultan, honorary chairman of the Saudi Umran Socity, a group of architects in the kingdom, was concerned with preserving the cultural identity of his country. He was impressed by Fathy's philosophy and decided that adobe should be taken up in Saudi Arabia. Within sight of Al-Dariya, Prince Sultan acquired a half-collapsed mud-brick farmhouse on a fifty-hectare estate in Al-Udhaibat (ill. 168). With

59 Steele, 1997, p.55.
60 Curtis, 1987, p. 49.
61 Steele, 1997, p. 199.
62 Fathy, *Ekistics*, March 21, 1966, p. 216.

the help of one of the last traditional master-builders, Prince Sultan rebuilt the house using mud-brick. He also understood the essence of Fathy's message of using mud-brick; "we're not promoting building with mud. We are promoting traditional architecture, which implies that we go out and improve local materials and make them adaptable to changing conditions and changing times".[63]

Dar Al-Islam village (1980) was another project which Fathy carried out with mud-brick, except for the foundations which were made of concrete (ill. 149). In New Mexico, where rainfall and snow are frequent, mud-brick had disadvantages, but Fathy believed that mud-brick was a material that was well-suited to the hot climate of the region. In the United States mud-brick construction is also more expensive than poured concrete. As a result, Fathy's use to this material in Abiquiu can be seen as an expensive venture. "Materials and techniques which evolved out of practical and economic necessities in one country had become a luxury in another".[64] In recent years the builders in Abiquiu have carried out experimental building using pumice, a volcanic rock which is inexpensive, light, easily poured, spongy, absorbs water and available in New Mexico. They realised that pumice is more efficient than adobe in terms of solar energy uses; but has little compressible strength, which limits its use to one-storey.[65] Durkee also recommended that pumice should be seriously considered as an alternative material in the future.[66] The most disastrous effect on the physical appearance of all the buildings of Dar Al-Islam Centre comes mainly from the regulations relating to coatings. The building code required cement plaster to be used as coating for adobe walls rather than the more natural and well-tested mud plaster. Steele argues that "what should be a soft and natural earth plaster surface look like pressed plastic".[67]

Fathy's last recorded work in mud-brick was the Andrioli house (1984) in Fayum (ill. 156). The walls of the house were also plastered with mud, an effect which made the house look like a piece of sculpture, an important element in the appeal of Fathy's earth-architecture. The present owner of the house, Dr Basil Diab, although appreciative

63 William Facey, Building on the Past. *Aramco World*, v. 50, no. 4, July / August 1999, pp. 32-45.
64 Holod and Khan, 1997, p. 216.
65 Schleifer, *Ekistics*, v. 304, January / February 1984, p. 59.
66 Serageldin and Steele, 1996, p. 159.
67 Ibid., pp. 158-159.

of the advantages of using mud-bricks and plaster, re-plastered the walls with cement in order to avoid the continual maintenance of the mud-plastered walls.[68] Fathy's influence is apparent in the Fayum area and many people reacted positively towards his approach of using mud-brick as a building material. For example, Eyvilin Boria, a French woman who settled in Fayum and who strove to restore the old craft of pottery, built a school to train the children of the village (ill. 169). Influenced by Fathy, the school is dominated by mud-brick domes, vaults and thick walls which suggest a contemporary revival of a lost tradition.[69]

The late 1960s signalled a remarkable change in Fathy's architectural direction as a result of his decision to use stone instead of mud-brick in his buildings. Because of the building of the High Dam in Aswan, which cut off the flood of the Nile with its rich silt layer, the government prohibited the use of the topsoil in making mud-brick. Therefore, Fathy visited some villages on the Red Sea where he found that stone was used successfully. Fathy's first experiment with stone came with the Fouad Riad house (1967) (ill. 110).[70] The house is constructed of limestone which is locally available. Although the main intention was to plaster over the surface, Fathy used large, undressed blocks for the walls, while the openings are framed with dressed stone. Vaults and domes are dressed with thin Roman-like blocks. Stone claustrawork is used as a parapet and infill to the ends of the vaults. In fact, the Riad house demonstrated Fathy's ability to stretch the use of stone beyond its inherent characteristics.

Like the Riad house, the Kazerouni house (1979) was also built of limestone (ill. 141). Fathy treated the limestone with the herb fenugreek. This is a traditional method of preventing cracking and chipping that Fathy learned from his research into traditional Egyptian architecture. The herb is boiled until it forms a sticky paste and then applied to the limestone blocks.[71] Like the walls, the floors inside the house were also covered with sheets of stone to give the home a more rural look. On top of the limestone walls, Fathy built the large dome of mud-brick. Fathy also built the V.I.P. house (1974) of stone quarried from the area in order to both respect the architectural character of the

68 Author's interview with Dr Basil Diab, 2000.
69 Author's visit to Eyvilin Boria's school and an interview with her.
70 Richards, Serageldin and Rastorfer, 1985, p. 165.
71 Iskandar, *Egypt Today*, v. 18, no. 5, May 1997, p. 87.

place, reduce the cost of transporting other building materials from far away and to establish a new amenity for the town.[72]

In the 1980s, Fathy continued to build with stone in Egypt and elsewhere in the Arab world. Unlike the Fouad Riade and the Kazerouni houses, which were built of golden-earth coloured stone, the Murad Greiss (1980-1984) house was built out of chalky-white limestone, which was derived from the Muqattam hill and stands in sharp contrast to the surroundings (ill. 146). In large-scale projects, including the Sadat rest-house (ill. 154), Fathy also used stone and brick for the main structure, although Richards believed that its "large dimensions have appropriately called for the introduction of reinforced concrete".[73] Like the Murad Greiss house, the Hassan Rashad house (1986) was built of local stone, creating an impressive contrast with the surrounding vegetation characteristic of the Delta region (ill. 158).[74]

The third local building material which Fathy used was sand-brick. Unlike the mud-brick and limestone, sand-brick was not employed widely. Fathy discovered the sand-brick when he decided to build his own house (1971) (ill. 120). The landscape of the site consisted of agglomerated sand which contains sand and soft stone. Fathy investigated the surrounding area of the site and found that all the dwellings of the Bedouin were built of this local material. Fathy demonstrated that his spatial thesis and his formal typology were not restricted to the use of mud brick, but could adapt to local materials and conditions. Frank Lloyd Wright believed that any "building for human purposes should be an elemental, sympathetic feature of the ground, complementary to its nature-environment, belonging by kinship to the terrain".[75] Although the Bedouin dwellings were clear evidence of the strength and durability of the sand, Fathy tested it scientifically. He sent samples to the laboratories of Cairo University and the result was satisfactory for him. The blocks made of sand proved to take at least 25 kg / cm^2 compression and its absorbtivity was very low. Fathy was convinced by the result of the test and used the sand-brick as if it were mud-brick, by increasing the thickness of the walls. Fathy explained that the increase in wall thickness would not affect the cost

72 Ms., FAAUC, no. 186, p. 4.
73 Richards, Serageldin and Rastorfer, 1985, p. 168.
74 Steele, 1997, p. 201.
75 Wright, 1953, p. 130.

because the material was quarried locally. "It is a singular advantage to be able to build with materials that are so readily to hand". Fathy also argued that the thickness of walls not only provides better insulation, but also would take the lateral thrust exerted by the domes and vaults which he determined as the type of roofing. He believed that the "character would be enhanced, giving a feeling of permanency more so than if it had been built with thin walls, using cement-blocks or even stone".[76] Like mud-brick, the sand-brick was another building material which Fathy revived and which subsequently became widely used in Egypt.

Occasionally, Fathy used wood for roofing some spaces of his houses where this was necessary. Fathy believed that a "house should reflect nature – as the mountains lead up to trees, so the walls of stone lead up to ceilings of wood".[77] These flat wooden roofs can be found in the Al-Nasr house (1945), the Abu-Gabal house (1947) and the Kazerouni house. These houses exhibited Fathy's unusual ability to create skilful contrasts between flat and domed forms as well as the juxtaposition of raw and refined materials such as mud-brick and wood.

The reuse of fragments of historical buildings, such as wooden work and building materials was a feature of some of Fathy's houses, which gave them an old character. One of the most distinctive features in the addition of the Hamid Said house was the gallery. It was planned to run the entire length of the old studio in order to serve as a transitional area between the old and new studios. The gallery ends with an area called the 'meditation corner', where Said recognised that the "organic presence, pulse and mystery are all there".[78] Said furnished the wall of the gallery with a book cabinet, whose door was an old piece of wood. "I bought it very cheap because no one understood its real value. It was made in a time when the craftsman expressed the spirit of Islam in his work".[79] Like Said, Fathy himself was keen to possess some of these old crafts. When he moved to the Ali Labib house in 4 Darb El-Labbana Street, Fathy explained that he had bought old wooden doors, *māshrābīyyāhs* and panelled cupboards some years earlier. He was dreaming that one-day he would incorporate them into his

76 Ms., FAAUC, no. 193, p. 1.
77 Hefferons, *Cairo Today*, v. 3, no. 10, October 1982, p. 46.
78 Steele, 1997, p. 58.
79 Author's interview with Hamid Said, 2000.

own house. Fathy believed that in the Ali Labib house these old items found a home that suited them and was probably similar to the ones they were taken from.[80] Like Fathy's house, many of the wood finishes and fixtures of the Riad house (1967) were brought from old buildings. Even the other woodwork was custom-made at the workshop of the Department of Antiquities.[81] Old building materials, such as stone, were also reused and this can be detected in the Nassif house (1974). Paradoxically, Nassif, who tried to save the architectural heritage of his country, bought old houses in Jeddah's old sector, and demolished them to reuse their traditional coral blocks.[82]

Fathy's attitude towards the use of natural building materials was different to that of the avant-garde, whose ideology was to search for the new. Le Corbusier, for example, was impressed by the new building materials made available by the industrial revolution. Unlike Fathy, Le Corbusier perceived natural materials as "heterogeneous and doubtful materials" and therefore they should be replaced by "homogeneous and artificial ones". Le Corbusier believed that natural materials "which are infinitely variable in composition, must be replaced by fixed ones".[83] In contrast, Fathy believed that a change from traditional to modern methods was allowed only if the change meant an improvement.

Undoubtedly, the outstanding architectural quality and character of Fathy's work and the positive effect of their images do not only come from its reliance upon traditional prototypes and deliberate plans, but also from their interesting exteriors. Fathy believed that the outstanding quality of the architecture of the past was derived, not from stylistic elements, but from the superiority of its essential features, their proportional arrangement and their basic ideas. Fathy maintained a coherence and unity between inhabited space, construction and landscape. Therefore, the aesthetic of his work comes from the harmony of putting the architectural elements together as well as juxtaposing them in order to provide variety and visual interest through change in their size and scale. Fathy's work embodied for him the principles of what good architecture and

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80 Fouad, *Cairo Today*, September 1981, p. 41.
81 Richards, Serageldin and Rastorfer,, 1985, p. 165.
82 Alkhateeb, *Saudi Gazette*, 20 September 1979, p. 5. More information about Jeddah's coral houses, see Chapter 4, p. 95.
83 Le Corbusier, *Towards A New Architecture*. London, 1948, p. 214.

building ought to be and New Gourna village was the guide to what these principles were. A thorough understanding of the principles of architectural composition and the idea of perceiving a building as an entity as well as articulating the function and identity of each member of the building were the key to Fathy's architecture.

The principles of architectural composition

Fathy's understanding of the laws of composition helped him to create a conscious arrangement of elements of a building or parts of a village in a functionally and visually satisfying whole. However, under the umbrella of satisfactory composition in Fathy's architecture, there are a number of interconnecting factors, which need to be examined separately in order to explore their characteristics and make a clear exposition of their individuality. These elements include hierarchy and contrast, human scale, harmony of building and landscape and colour, light and shadow. Fathy believed that the careful integration of these factors would produce harmonious design for a building or a city, just as different notes in music form a harmonious chord.

Hierarchy and Contrast

Hierarchies were an essential factor in Fathy's design process, which helped him to highlight the importance of the interior and exterior of a building. Fathy respected scale, proportion, contrast and balance to enhance the character of buildings. All the spaces in his work were covered with variations of domes, vaults and flat roofs, which achieved pleasant spatial and visual characteristics. For example, he used two different types of dome; one larger than the other. He employed the high Sassanid dome with squinches and drum to dominate the low Byzantine dome with pendentives. In other cases Fathy unified the domes and the vaults by the introduction of another vertical element such as the chimney in the main façade of the ceramic factory (1950), which balanced and provided a magnificent contrast of horizontals and vertical elements (ill. 68).

The Fares School exhibited Fathy's creativity in combining both functional forms with environmental sensitivity. In elevation, the repetitive rounded domes and the slotted vaults of the classrooms clearly express their intended function, but they also create a sense of a linear counterpoint as well as contrasts to the massive domes of the assembly and administrative spaces (ill. 81). Although, the school design is a straightforward

solution of the particular conditions, it is by no means vital and satisfactory. The composition of the school blocks shows Fathy's remarkable ability to handle simple materials and forms in a remarkable way. Contrast in proportion was also evident in the Al-Wehda mosque (1974). The façade of the main prayer hall is characterised by the repetition of large pointed-arch openings in the ground floor and smaller ones in the clearstory. The facade is also dominated by a big dome which covers the main prayer hall and a tall minaret which achieved a balance with the soaring dome of the adjacent mausoleum (ill. 126). This has achieved a contrast in proportion between forms of the same type and a general contrast of geometrical shapes.

In large-scale projects such as the Nile festival village (1977-1982), the different facades featured a well-massed handling of form with accompanying appropriate details. Fathy used horizontality as an expression of character, but this was emphasised by the contrasting repetition of domes and vaults of different sizes. An effect of climax is heightened in the main facade by using a large wooden lantern over the reception area, a motif which Fathy employed on a smaller scale in many of his domestic works. Juxtaposition of solid and void also succeeded in determining the size and shape of the village's units and in creating a picturesque effect. Fathy also achieved hierarchy in small-scale jobs such as the Shahira Mehrez apartment (1967), which Steele regarded as "a virtuoso performance in architectural scale, proportion, level and detail".[84] Nevertheless, as hierarchies played a distinctive role in shaping Fathy's architecture, human scale was also an important constituent.

Human scale

Fathy argued that technological discoveries should be welcomed, but that it should also be recognised that they create problems in other fields concerning humanity such as aesthetics. Fathy pointed out that the new building techniques dehumanised architecture, a tendency which was "neither moral nor necessary". He also emphasised that the "new engineering forms need assimilating into the order of architecture – need their external truth brought up to match their internal truth". Fathy explained that although the Gothic builders were exploring technical innovations which were as new in their days as the innovations of twentieth century science and technology, they never

84 Steele, 1997, p. 197.

allowed their architecture to be dominated by these technological consideration alone. "All Gothic cathedrals are built to the human scale". For Fathy, this attitude is what architects should adhere to and "not dehumanize architecture, but humanize the new technology".[85]

Fathy argued that if a building does not respect human reference and human scale it would not add to the culture of man. Therefore, architects should not lose touch with human scale in order to enable people to articulate and comprehend the elements of their buildings. Fathy believed that architects should reintroduce humanity into architecture by reintroducing "human scale, human needs, and human tradition". For Fathy, beautiful architecture is an act of civility towards those who approach the building. "It is as if the building were bowing to you at every corner, as in a minuet".[86] Fathy recommended that even the houses in a village "should be restful, private, human in size and related simply to their environment".[87]

Harmony of buildings and landscape

Fathy believed that architects are not placing their buildings in empty space, as mere plans on a blank sheet of paper, but they are introducing a new element into an environment which has existed in equilibrium for a very long time. For Fathy, the architect has responsibilities to the surrounding environment, and, "if he shirks the responsibility and does violence to the environment by building without reference to it, he is committing a crime against architecture and civilization".[88] Fathy's primary concern was to give his designs the appearance of having grown out of the surrounding landscape. A creative artist, Giedion explained,

> does not want to copy his surroundings... or to make us see them through his eyes... He is a specialist who shows us in his work, as if in a mirror, something we have not realized for ourselves... He finds the outer symbols for the feelings which really possess us but which for us are only chaotic.[89]

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85 Fathy, The City of the Future: Aesthetic in the C.O.F. Internal Report to the Athens Centre of Ekistics, 1 September 1961. Ms., FAAUC, no. 51, p. 7.
86 Holod and Rastorfer, 1983, p. 243.
87 Ms., FAAUC, no. 46, p. 1.
88 Fathy, 1986, pp. 4-5.
89 Sigfried Giedion, *Space, Time and Architecture: the Growth of a New Tradition*. Cambridge, Mass., 1982, p. 432.

In his wonderful gouache of the New Gourna plan, Fathy avoided conventional architect's plans, which he believed, distort the natural forms in order to make the setting match his buildings (ill. 42). He executed his drawings in plain lines and rendered them with sketches of the natural features of old Gourna, following the conventions of ancient Egyptian drawings seen in the Tombs of the Nobles. Fathy included the hill, which represented a sacred rock for the village. He also inserted the cow-goddess, Hathor, the guardian of the Nobles' cemetery. Other features, such as the trees and the date-palm, and animals such as the cow and the buffalo, were to present the native features of Upper Egypt. Fathy believed that "in Gourna it is our duty to build a village that should not be false to Egypt".[90] Similarly, Fathy constructed the village's public buildings in the same way and employed the same methods of construction as the private houses. He believed that, "the village will be assured of architectural harmony and will be spared the sight of a group of buildings proclaiming their officialism and self-assumed superiority in their alien architecture ".[91]

In the Nile festival village (1977-1982), Fathy deliberately intended to hold the profile of the whole village's facades below the level of the west bank treetops, so that it does not intrude upon the view of the western necropolis as seen from the Luxor side of the river. However, the scale and architectural character of the project would merge harmoniously into the foreground of the scene. Likewise, the architecture of the Al-Dariya model-house (1966) has achieved a form of expression that is so distinctive and identified by its harmonizing characteristics. Darl Rastorfer believes that Fathy's Al-Dariya model is carefully "attuned to the natural habitat, climate, and the local traditional house form".[92]

Fascination with the landscape was a constant theme in Fathy's architecture. The attempt to unifying buildings with their settings was achieved through the prevalent horizontality of their compositions and the sympathy for the nature exhibited in the choice of materials. In the Riad house (1967), Fathy situated the house close to the wall on the roadside, in order to allow a more private area in the back of the house (ill. 111).

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90 Fathy, 1973, p. 44.
91 Ibid., p. 122.
92 Richards, Serageldin and Rastorfer, 1985, p. 164.

This location made the house appear insignificant from the roadside but it expresses itself from the private gardens that connect it to the field beyond. The structure of the vaulted loggia, which serves as a sitting area overlooking the garden is characterised by its low, horizontal scale. Steele believes that the sensitivity with which Fathy handled the changes of level within it, "all tend to tie it to the land and give it a timeless sense of permanence and belonging".[93] The sites of the Kazerouni house (1979) and the Murad Greiss house (1980) are also characterised by their surrounding green fields overlooking a magnificent view of the pyramids. However, Fathy positioned the houses in such a way as to benefit from the prevailing breeze as well as to take advantage of the view of the pyramids. The Andrioli house (1984) is another example, built on a north-facing, moderately-sloping site overlooking a magnificent view of Lake Karoun, Fayum (ill. 156). The plan shows that Fathy devised his design from the specific characteristics of the site.

Colour, light and shadow

Applied colour seldom appears in Fathy's buildings, but the natural colours of materials, including the rich earth-colour of the mud-brick is always there, identifying both the origins of this architecture and its close link to the landscape. The visual impact of the homogeneous single colour emphasised the basic form of the building without the distraction of various colours, textures or materials. Fathy's use of earth-colour as a single colour, certainly recalls the whitewashed villages of the Mediterranean basin such as Morroco, Tunisia, Italy and Greece, which also influenced Le Corbusier. Fathy's use of applied colour can be detected only in the coloured glass which adorned the openings of domes or vaults to make them appealing to its viewers.

Fathy's architecture was, to a large extent, determined by a unique vision of light and its influence on materials. It was a preoccupation Fathy shared with a number of Western architects such as Louis Kahn, Richard Neutra and Erich Mendelsohn. Fathy's interest in surfaces and volumes was not superficial. He was interested in light especially in the way it responded to materials and the way materials responded to light. The dynamic contrast of light and shade, and the dramatic use of space were features which Fathy had sensed in the architecture of medieval Cairo. Most of his work demonstrated a strong

93 Steele, 1989, p. 51.

relationship between light and architecture, and he would probably have agreed with Le Corbusier's dictum; "Architecture is the masterly, correct and magnificent play of masses brought together in light".[94] Fathy employed light as an expressive tool to give value to walls, windows, materials and textures in his buildings. Louis Kahn stated, "The structure is a design in light. The vault, the dome, the arch, the column are structures related to the character of light". Kahn argued that natural light provides mood to space by the shades of light during the day as well as the seasons of the year, "as it enters and modifies the space".[95] From a traditional point of view, it is likely that Fathy employed light to represent hierarchical significance, in which darkness is associated with private space while light is associated with the appearance of public space.

The real power of light is not derived completely from its inherent character, but requires some sort of darkness to assert itself. Shadows can accentuate a building's form and represent things that are less than real. Fathy was fully aware that light entering through a window or *māshrābīyyāh* evokes an expressive shadow. For example, in the Nasser Al-Sabah house (1978), the pergola over the court is covered by a wooden bell-shaped, patterned open-work, that casts fine shadows onto the space. It is also reminiscent of one that Fathy employed in the Monastirli house in 1950. Fathy also utilised light and shadow to emphasise the textures of materials as well as to reinforce certain structural ideas in a building. For example, the mud plaster has irregular rough texture which adds considerable richness to its effect on the eye. Fathy was able to create a dynamic composition, in which light and shade were handled as positive features to lend drama to the buildings.

The most subtle characteristics of Fathy's buildings come mainly from his array of elements that were tested by the Islamic-Arabic traditions, as well as the Egyptian culture. Another important point which Fathy considered in his designs, according to the Islamic-Arabic traditions, was to give each room the dimensions appropriate to its use regardless of the symmetry or asymmetry of the façade. Fathy argued that "the

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94 Le Corbusier, 1948, p. 29.

95 Urs Buttiker, *Louis I. Kahn, Light And Space*. New York, 1994, p. 10. The quotation is from, R.S. Wurman; E. Feldman: *The Notebooks and Drawings of Louis Kahn*. London, 1973.

aesthetic value in the façade arises from the logical design of the inner spaces and the harmonious assemblage of the various units, affecting unity in variety rather than uniformity at the expense of the quality of the living space". However, he determined the ceiling heights and the dimensions of the spaces according to the golden section. Fathy also compensated for the difference of their roof levels by employing a uniform parapet level to satisfy "the quality of the inner space as well as respecting the regularity of the lines of the façade".[96]

Although, domes, vaults, bearing walls, *māshrābīyyāhs*, *mālqāf*, courtyard and *qā'āh* together created a recognised language in Fathy's work and established his art of traditional building, his approach was based on a series of principles, which he followed irrespective of the specific conditions which influence the design of any one house. These principles included, the arrangement of all spaces around an inner courtyard and the division of domestic space into two zones relating to the separation of the sexes. In addition, the *qā'āh*, which was roofed by a dome or a *shūkhshākhāh*, represented the central element of the formal area in a house and provided Fathy with the basis for designing all the possible variations of his houses. The idealized spatial system of the Islamic-Arabic house led Fathy to a notion of type which became a methodological and conceptual tool to constitute the basic vocabulary of his designs.

The way that tradition formed the basis of Fathy's design approach contradicted the Western concept of progress and the continual reinvention of the plan. While Fathy sought an architecture which found its legitimacy in the classical tradition and composition, Western modernists required an architecture which would conform to the requirements of modern technology as well as express and evoke the spirit of their epoch. Likewise, the western concept of urban-planning was that a modern metropolis requires visibly monumental expressions as well as an ambition to build the world anew, while Fathy believed that the traditional planning-pattern is more human and relevant to people's life. Just as Fathy's buildings rested upon the vocabulary of the Islamic-Arabic house, the concept of his town planning was also based on that of the traditional Arab city and this will form the subject of the next chapter.

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96 Ms., FAAUC, no. 186, p. 7.

CHAPTER SIX

PRINCIPLES OF VILLAGE PLANNING

> You must start right from the beginning, letting your new buildings grow from the daily lives of the people who will live in them, shaping the houses to the measure of the people's songs, weaving the pattern of a village as if on the village looms, mindful of the trees and the crops that will grow there, respectful to the skyline and humble before the seasons. There must be neither faked tradition nor faked modernity, but an architecture that will be the visible and permanent expression of the character of a community.[1]

Throughout his life Fathy was concerned with the problem of housing the poor. His aspiration found expression in four major community projects, whose layouts were based on traditional concepts. These were the New Gourna village (1945-1948), his best-known project, the Lu'luat Al-Sahara village (1950), whose continuity is a clear "testimony to its enduring design",[2] the New Bariz village (1967), Fathy's second major community project and the Dar Al-Islam village (1980). There were some other unbuilt projects including the Greater Mussayib village (1958), the Harraniya village (1964) and the Sohar village (1973). Fathy's approach to village planning was also used in designing his tourist villages, including the Nile festival village (1977-1982) and the Journalists' Association Resort Village (1989).

There is surely no project in Fathy's renowned and, by now, well-documented life that caused so much sensation as the New Gourna village. While some other villages were realised by the architect, only this work achieved immediate fame, and it has, in many respects, remained a controversial project ever since. Although the New Gourna village remains the cornerstone of Fathy's career, he believed that the Dar Al-Islam village was its climax. Abdullah Schleifer believes that "the similarities in design, material and animating Islamic values make it almost too easy to consider Abiquiu [Dar Al-Islam village] as Hassan Fathy's 'Gourna West'".[3]

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1 Fathy, 1973, p. 45.
2 Steele, 1997, p. 92.
3 Schleifer, *Arts & The Islamic World*, v.1, no.1, Winter 1982 / 1983, p.34.

Fathy believed that each city, town or village was unique and that its cultural evolution depended largely on its unique qualities. Nevertheless, Fathy's approach to town planning was that a general survey method, applicable to all towns and villages, had to be found. This planning approach was clearly expressed by Lewis Mumford (1895-1990), who argued that true planning is an attempt to clarify reality not to displace it, as well as "to grasp firmly all the elements necessary to bring the geographic and economic facts in harmony with human purposes".[4] He also believed that the "village remains the essential root from which fresh urban shoots from time to time thrust upward.[5] A generation before Fathy, the British planner, Patrick Geddes (1854-1932), was a strong advocate of cultural tradition. Geddes was perhaps the first to undertake a detailed survey of town planning. He emphasised the importance of climatic conditions, historic heritage, geographic settings, economic processes, and social ideals and purposes.[6]

Fathy argued that when an architect or planner designs a building or a town, each line is determined by not only the application of complex mechanical laws, but also by the addition of other important sciences which concern man such as "his environment and society and to which he must add his own artistic and creative sensitivity". Like Geddes, Fathy explained that sciences such as demography, climatology, geography, sociology, physiology, economics and the theory of architecture are no less important than the physical and mechanical sciences because they are "concerned with man, and man is the end of architecture". Fathy believed that the cornerstone in assessing any project "lies in the answer to the question: 'is it for man or for something else?... If it is for man we can discuss and argue, but if it is for something else; politics, economy, etc., there will be no discussion because really, anything could be done then".[7] This was the way Fathy introduced a breadth of vision into an activity which, in the hands of architects, engineers and surveyors, was threatening to be concerned only with the physical environment. There are several essential factors that should be considered in

4 Lewis Mumford, *The Culture of Cities*. London, 1944, p. 376.
5 Ibid., p. 286.
6 Ibid., p. 376.
7 Fathy, Bariz: A Case Study in Rural Housing (New Valley - Kharga Oasis). A Paper Submitted in Rural Habitat in the Arab Countries Symposium, 6 - 11 November 1977. Ms., FAAUC, no. 159, p. 3.

evaluating Fathy's theory of village planning including demographic, climatic, socio-economic, cultural, aesthetic and spiritual factors.

Demographic factors

Fathy argued that a human settlement made up of inhabitants of one kind of occupation only "does not constitute an organic community". He believed that a diversity of occupational groups is required to ensure the provision of all the different services as well as to achieve a satisfactory standard of living.[8] In New Gourna village Fathy was confronted with seven thousand tomb robbers;[9] most of them were employed as labourers on the excavation of these tombs and the rest of the population used to serve the antiquities trade. Fathy was fully aware of the fact that the Gournis would find their living in the New Gourna village more difficult and more expensive because they would never make their living from cultivating the land around the village. As a result, the population of the village would continue to shrink as a natural consequence of moving them away from the source of their actual economic support.[10] However, Fathy's main aim was to find other possible ways to keep the population of the village growing. He explained that if the Gournis became mostly craftsmen, the population would become stable at its present figure and would then begin to grow naturally. Though an essential part of the project was to extend the Gournis' resources by introducing to them the various trades connected with building such as brick-making, quarrying, etc., Fathy believed that if "these new activities started in the village, it would immediately give the people a more satisfying life. Their personal possessions would multiply and their houses become more beautiful".[11]

In his Greater Mussayib village (1958) in Iraq, a settlement consisting only of farmers, Fathy sorted out the people who would live in the new village into non-farming families and farmers. Like the New Gourna village, Fathy's intention was to establish well-mixed occupational groups to ensure the success of this farming community. This in turn, Fathy believed, "will bring the social life to the standards sufficient to keep the

8 Ibid., p. 13.
9 Fathy, 1973, p. 15.
10 Ibid., pp. 59-60.
11 Ibid., pp. 60-61.

people on the land and stop the drift to the towns".[12] Fathy argued that the existing conditions of life in the rural areas in Iraq were not high enough to be taken as a basis for planning the new communities. However, he suggested evaluating the services and goods which needed to be provided to the whole area of Greater Mussayib and working out the corresponding number of professionals, tradesmen and artisans necessary to fulfil these services. He also explained that the representatives of the various occupations should be distributed over the different villages of Greater Mussayib, based on the actual demands of one village seen in the context of the regional milieu.[13]

In addition, to form an idea about the intended planning of the village, Fathy also recommended statistical analysis of successful rural communities in different countries. Therefore, he used statistical data from Iraq, Palestine and rural districts in England and America. As in New Gourna, Fathy did not ignore the social dynamics of the new communities. He argued that when we create new communities out of persons alien to one another, the planning process would lack the data of the social status hierarchy. Therefore, he explained that the *sheikhs* (leaders) of their former communities are the only people who can help in grouping them in the village plan.[14] Fathy's extensive studies were of primary importance to the planning of the village and were appreciated by his colleague, A. Hadjopoulos, who recommended that Fathy's work should be read by all Branches concerned in the firm of Doxiadis.[15]

Unlike New Gourna village, the inhabitants of the New Bariz village (1967), as a new proposed community, were unknown; his design for the community of Dar Al-Islam village (1980), which was "isolated and does not constitute an element within a larger neighbourhood" faced a similar difficulty.[16] Fathy argued that he did not know the people for whom he must build in the New Bariz village. "All I had at my disposal were the demographic facts, the climatic information, the geographic facts, some numerical indication of professional class; I myself brought the aesthetics; the feeling for man in

12 Fathy, Comments on the Draft Dox: The Regional Plan for the Ekistic Development of Greater Mussayib, Doxiadis Associates, 24 June 1958. Ms., FAAUC, no. 35, p. 1.
13 Ibid., p. 2.
14 Ibid., p. 5.
15 Ibid., p. 1.
16 Holod and Khan, 1997, p. 216.

man-made space".[17] The New Bariz village was intended to accommodate a community of 150 families of farmers and 100 families of the various other professions. However, Fathy chose these professions by kind, then by number from an international standard classification of occupations made in 1958. Fathy also suggested recruiting the inhabitants for the new village from the over-populated villages in the region and distributing them in a well balanced demographic composition with regard to culture, professions, habits, sex and age. "In this way, if they were to loose their attachment to the place in the old villages, they would not be deprived of their attachment to the community".[18] However, the demographic factor represented an essential element in Fathy's village design and provided him with a means of organising the villages' neighbourhoods as well as integrating them as living organisms with respect to the professions of their inhabitants.

Town planning and climate

As in the Islamic-Arabic house, which Fathy perceived as the key concept of his architecture, climate was also a dominant factor affecting town planning. Fathy argued that the analysis of the traditional Arab house led him to realise the optimum configuration for patterning buildings. His concern with civility and the quality of people's lives helped him to create a satisfying use of space including public, semi-public and private spaces in the planning of his villages. Fathy believed that consideration of these different spaces "would contribute to the beautification of the city, bringing it up to the scale of man and not that of the car".[19] From the time of the Arab invasion (641) until the later part of the Turkish period (1798), the layout of almost all traditional cities in this region such as Fez, Cairo and Jerusalem, was similar. It was characterised by large open courtyards and narrow, winding and appropriately orientated streets with a similar arrangement of housing plots and closed vistas to achieve shade as well as to avoid the hot winds of the desert. Fathy argued that this concept of planning "enabled the people to articulate space more advantageously, to

17 Ms., FAAUC, no. 159, p. 12.
18 Ibid., pp. 13-14.
19 Fathy, Constancy, Transposition and Change in the Arab City, in *Madina to Metropolis*, by L. Carl Brown, ed., Princeton, 1973, p. 325.

experiment with ideas, and to solve problems of architecture and planning as they occurred".[20]

Fathy explained that the secondary, narrow, winding streets with closed vistas work as a temperature regulator and reservoirs of cool and fresh air, essentially the same function as the courtyard in a house.[21] In 1973, a research team from the Architectural Association in London, including Fathy's disciple, El-Farouk, who, in the same year collaborated with Fathy in the redevelopment of the Sohar village in Oman,[22] carried out an investigation of medieval Cairo to re-evaluate indigenous planning. The outcome of the study showed that the narrow streets of the city are in the shade most of the time and establish areas of high pressure, while sunny areas in the intersections of the main roads create a low pressure. This difference in air pressure of the two areas would create an air flow by convection.[23] From the aesthetic point of view, Fathy believed that this irregular layout creates more interest and "serves as a stimulus to the creativity, ingenuity, and sense of discrimination of the architect and master-builder".[24]

Although the irregular plan of the Arab city might appear to have developed chaotically, it has its functional and logical reasons. Fathy explained that it has certain advantages over many modern city plans using the gridiron system.[25] He believed that the arrangement of the Arab city "appears far superior to the gridiron layout with wide boulevards of Washington, D.C... that is often held up as a model for city planning, even in hot arid climates".[26] Barry J. Kemp explains that providing a satisfactory urban aesthetic, simple geometrical layouts need some variation in the architecture itself in order to avoid inhuman monotony. Kemp argues that although traditional Egyptian domestic architecture lacked this variation, the layout of the winding street provided an endlessly variable juxtaposition of flat planes, which gave each part an identity of its own. Kemp believes that the "combination of these organic neighbourhood units with a

20 Ibid., pp. 320, 322.
21 Ibid., p. 322.
22 For more information about the research team, see Chapter 4, p. 94.
23 Omar El-Farouk, John Norton, Wendy Etchells, Jocelyn Levaux, Allan Cain and Farroukh Afshar, Report of a Field Work Carried out in Egypt as Part of the III World Studies Program, Architectural Association, School of Architecture, London, from 25 March to 10 May 1973. Unpublished report, FAAUC.
24 Fathy, Constancy, Transposition and Change in the Arab City, p. 322.
25 Ibid.
26 Fathy, 1986, p. 64.

system of wide thoroughfares leading to the city centre represents a probably very effective and acceptable type of urban layout",[27] suitable to modern town planning. He also regarded Fathy's New Gourna village as a "brilliant but ill-fated... attempt to infuse into a new housing scheme in Egypt the essential characteristics of a traditional village".[28]

Fathy argued that the arrangement of streets with closed vistas has another advantage over wide, straight streets. Every enclosed view within the old city wall consisted of "important buildings and less important ones in a certain order, increasing in importance, like a crescendo, as they approach the climax of the mosque or palace". This composition gives a feeling of unity while preserving "a variety of artistic expression that could not be achieved if the buildings were of a monotonous design and layout". Fathy also explained that the only point to attract the attention of the pedestrian in a straight street with parallel sides and an open vista is the vanishing point where the parallel lines meet at the horizon. "As these lines meet only at infinity, the pedestrian would feel psychologically tired before he had walked very far".[29]

The site plan of New Gourna village consisted of the mosque, the marketplace, the *khān* (lodging place for travellers or merchants), the village hall, the theatre, the permanent exhibition hall, the schools and the housing (ill. 41). In designing the streets of the village Fathy was inspired by the beautiful streets of old Cairo (ill. 170). He was particularly impressed by the street of Darb El-Labbana, with its seventeenth-century houses. Fathy believed that these rare examples, with their beauty, civility and culture would "raise our esteem for humanity".[30]

The broad streets, which separate the residential quarters and connect all the public buildings, were designed to serve as the main traffic routes and to allow good ventilation to the blocks of houses. By way of contrast, the streets which give access to the semi-private squares of the different groups of houses, were designed to provide

27 Peter J. Ucko, Ruth Tringham and G. W. Dimbleby, *Man, Settlement and Urbanism*. London, 1972, p. 675.
28 Ibid., p. 680.
29 Fathy, Constancy, Transposition and Change in the Arab City, p. 324.
30 Fathy, 1973, p. 72.

shade and a feeling of intimacy (ill. 43). They also included many corners and bends in order to discourage transients from using them as thoroughfares. Fathy explained that these streets appear to be interlocking to allow easy intercommunication between the families of the neighbouring groups. He also argued that the irregular street pattern was intentionally planned to avoid uniform designs and identical appearances of houses.

> I did not give the streets this crooked plan simply to make them quaint or because of some love for the Middle Ages. If I had adopted a regular plan like a gridiron, the houses would have been forced into a uniform design too. In long, straight streets, and even in symmetrical curves, the houses must all be exactly the same if the general appearance is not to be messy; yet the families who live in these houses will not be all the same.[31]

Fathy's ideas of spatial hierarchy generated and carried out in the New Gourna village were evident in his plan for the Greater Mussayib village (1958) in Iraq. The plan consisted of a central public area, where Fathy situated a mosque, public bath and on the periphery of the village, the houses of the villagers were arranged (ill. 84). The design of the houses included access to the nearby fields, which is similar to the concept that Fathy employed in his New Gourna village (ill. 85). In contrast to the random arrangement and the irregular pedestrian streets of New Gourna village, the Mussayib houses were organised on uniform and modular rows.[32] This concept of a dimensional grid was also employed in the Journalists' village (1989) where a linear arrangement was used for the residential blocks. Like the Mussayib village, the streets of the Journalists' village are regular without any corners or bends, to allow good ventilation and views to the residential blocks (ill. 162). The traditional themes can be detected in the layout of the village such as the narrowness of the pedestrian streets which provide a degree of quietness and great opportunities for social relationships. The vernacular features in planning are also emphasised by the contrast between the individuality of scale and architecture of both the residential units and the public buildings such as the mosque and the market.[33]

Fathy's use of the dimensional grid in these two projects was an indication of his

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31 Ibid., p. 71.
32 Steele, 1997, pp. 111, 113.
33 Author's visit to the Journalists' village.

temporary conversion to the international style, an approach that contradicted his planning principles. The planning of the Greater Mussayib village might be interpreted in terms of the impact of Doxiadis' modern ideas upon Fathy during his work in Greece. Fathy constantly stressed the need for design which evoked the social personality of the community and its regional character. His work in the Mussayib project refers to his concern to incorporate the traditional virtues of the Iraqi houses rather than modern principles. However, this conversion could be conceived as a temporary shift in his manner of design in order to adapt himself to a compellingly different environment. Furthermore, when Fathy returned to Egypt he did not employ any modern planning ideas in his subsequent villages, including the New Bariz and the Nile Festival villages, but rather, he continued to employ his traditional planning approach. In terms of the Journalists' village, there is no trace of Fathy's drawings for the village in his archive, although it was featured in *Alam Albena* in 1995,[34] and its design was attributed to Fathy. However, one cannot claim with certainty that Fathy had completed his plans for the village because he received the commission only a month before his death. It is likely that Fathy's designs for a prototype residential-unit, the mosque and the market were used, but the planning was carried out by another architect.[35]

In planning the New Bariz village, Fathy was influenced by the traditional layout and configuration, the narrow and meandering streets and the introverted houses of old Bariz village and the fourth century Bagawat settlement (ill. 171). Fathy also was impressed by an image of a typical Tunisian desert town plan, which he projected on a hypothetical plot-plan of a neighbourhood for New Bariz village.[36] Like New Gourna village the site plan of New Bariz village (1967) was based around a division between the domestic quarters, and the village centre, which is the heart of Fathy's planning philosophy. The centre of the village consists of a large mosque, a market, administration offices with two administrator's villas nearby, hospital, café, bus station and public bath (ill. 97). Fathy's main objective was to keep his buildings in shade most of the day. Unlike New Gourna village, he organised the buildings along linear north-south streets in order to take advantage of the shading which the buildings would cast

34 *Alam Albena*, no. 162, January 1995, pp. 26-30.
35 Many scholars in Egypt, including Dr Ahmed Abdou and Dr Nawal Hassan confirmed this viewpoint. Author's interview with them, 2000.
36 Ms., FAAUC, no. 159, pp. 8-9.

on the streets. For religious reasons the mosque deviated from this orientation and was situated on a diagonal axis oriented to Mecca, similar to the mosques of Lula'at Al-Sahara and New Gourna villages. Like New Gourna, Fathy also grouped the houses around squares with different areas and characteristics and joined them by *tākhtābūsh* to create a steady flow of air by convection between not only squares but also the pedestrian ways (ill. 99).[37] This vision of dwellings embedded into the environment of its region highlighted Fathy's ingenuity in responding with sensitivity to the climatic extremes of the hot arid-zones. Nevertheless, one cannot adequately characterise the nature of Fathy's planning approach without taking into consideration the scope of the socio-economic factor in the planning process.

Socio-economic factors

In developing plans for his villages Fathy's main concern was to identify dwellings which were a marriage "between the imagination of the people and the demands of their countryside".[38] A village should fit its inhabitants' routine of work and recreation and grow to reflect the idiosyncrasy of its community. Fathy believed that bricks and mortar should grow "into a living whole with harvest and planting, with weddings and funerals, with buying and selling, with craft, with trade, with the feelings of family for family and class for class".[39] The quality of Fathy's practical work as well as the way he organised space and buildings allowed him, according to Colin Ward, to have a major impact as the liberator of people from poverty and dependency. Ward believed that Fathy

> developed a philosophy of village development and social reconstruction very like that of Gandhi and his followers in India; self help, basic education... and cooperation... and Fathy's reflections on the relations between the architect and society, and between the architect and craftsmen, have universal relevance.[40]

In designing the New Gourna village Fathy's intention was to express and support the social structures of families and tribes who lived in four distinct hamlets. However, to keep the traditional physical structure of the five main tribal groups of old Gourna, the layout of the main streets was intended to separate the four quarters of the village, each

37 Fathy, 1986, p. 63.
38 Fathy, 1973, p. 19.
39 Ibid., p. 51.
40 Ward, *Royal Institute of British Architects Journal*, v. 81, February 1974, p. 36.

occupied by one of the main tribal groups of old Gourna.[41] Similarly, in Lula'at Al-Sahara village (1950), Fathy also tried to maintain a people's sense of intimacy and a close relationship between them. He constructed the housing block of two-storey mud-brick units and grouped the units around a common courtyard with access at one corner to give privacy to its inhabitants. He also designed a one-storey guest-house to be located at the entrance of the courtyard (ill. 76). This building is a large simple pavilion, where the families can accommodate their visitors during significant events such as weddings and funerals.[42] Whereas old patterns of sociability were preserved in New Gourna village, Michel Santiago argues that they were broken up in the Santorini village (1960),[43] designed by a group of architects led by Doxiadis,[44] at the time when Fathy was working for Doxiadis' firm (ill. 172). Santiago also believed that the sociable foci and group spaces were ignored.[45] This contrast further emphasises the soundness of the principles that underpinned Fathy's approach to planning.

In New Gourna, Fathy deliberately did not provide the village with running water because he believed it would break one of the frameworks of their tradition. In the villages of Egypt, like India, the girls preferred to go down to the river to bring water in jars on their heads. This was the only excuse for girls to go out and have the chance to be seen by young men, a social ritual that was essential for finding husbands. Instead, Fathy designed a public pump where the women could get clean water (ill. 59). The pump was inside an attractive, small-domed room and provided with seats round the wall, so that women could sit chatting while waiting their turn.[46] Another important feature was the *mādyāfāh* (gallery) which Fathy attached to the mosque (ill. 48). It is a long passage covered with a barrel vault and open on both sides to allow the cool north breeze. It is also provided with seats and there is a door leading into the forecourt of the mosque. The *mādyāfāh* was mainly provided to accommodate one of the Gournis' social habits. Strangers who arrive at the village usually go straight to the mosque in order to

41 Fathy, 1973, pp. 69-70.
42 Richards, Serageldin and Rastorfer, 1985, p. 162.
43 Michel Santiago, Functional Tradition. *The Architectural Review*, March 1960, pp. 208-209.
44 Myron Goldfinger, *Villages in the Sun: Mediterranean Community Architecture*. London, 1969, p. 19. Santorini lies in one of the most brutal earthquake-belts in the world. In 1958 a violent earthquake destroyed more than half of its houses.
45 Santiago, *The Architectural Review*, March 1960, pp. 208-209.
46 Fathy, 1973, pp. 99-100.

meet some of the villagers who can arrange for their lodging and also to exchange news.[47]

Fathy argued that architects and planners have to create opportunities for festivity and public life. "When the peasant comes back into the village after working hard in the fields, he should come into a relaxed environment where he can begin to live as a social being".[48] In a series of public buildings in New Gourna, Fathy provided the villagers with all their communal needs, such as trade, work, education and amusement. He built a market place, which is used for the weekly market, an event in the life of the village which is as much a holiday as a day of business (ills. 50-51). All men's transactions for the week are conducted on that day. It is also a very important day for the village's women, where they are allowed to be part of their society, selling, buying, walking and "gossiping" instead of only being members of the family. Trade on this day brings enormous rewards in making commerce a festive communal activity.[49]

Peasant society in Egypt is still very different from that of urban society. All sorts of arts still exist such as pottery, weaving and metalwork. Ceremonies and other forms of recreation are still part of folk art. Watching a game or a theatrical performance is more significant than the cinema or radio. Therefore, Fathy provided the New Gourna village with a permanent theatre where the peasants could present their favourite dances, songs and sports of everyday life as well as preserving them from extinction (ill. 49).[50] Education was another important social activity and Fathy conceived of a school as an important element in supporting the social structure of a community. In New Gourna, Fathy built two schools, one for boys and another for girls, to become model-schools in the area (ills. 55-56).[51] Similarly, he provided the Dar Al-Islam and the Lula'at Al-Sahara villages with schools which were, ingeniously, attached to the mosques. Fathy believed that in the Dar Al-Islam school

> it is the children's souls that will grow and the building must invite them to fly, not to cramp them like a Chinese shoe. With a few fateful

47 Ibid., p. 76.
48 Homes for Poor Shipwrecked, Says Hassan. *Jericho: The Habitat Newspaper*, 10 June 1976, p. 3.
49 Fathy, 1973, pp. 76-78.
50 Ibid., p. 79. Watching a game or a theatrical performance was a common custom in the Egyptian villages in the 1940s and 1950s, which is no longer exist because of the impact of the introduction of the television in the early 1960s.
51 Ibid., p. 85.

> lines on his drawing board the architect decrees the boundaries of the imagination, the peace of mind, the human stature of a generation to come. As long as the school shall stand, its walls, windows and doors will speak to little children at their most unprotected age. The architect has the grave duty of creating in a building a source of love and encouragement for these children and must let nothing come before it. If love goes into the building it will always show.[52]

As the social grouping and the customs of the people were crucial elements in Fathy's village planning, the economic life of the people was also of prime importance. Fathy argued that the livelihood of the future inhabitants of a village or a town and the way they earn their living would affect the design of their houses as well as the provision of public buildings. Fathy believed that a village cannot exist by itself and should not be perceived as an isolated entity. It should fit into the overall pattern in space as well as in the various dimensions of a socio-economic growth, "so that as it evolves and its work, trade, and way of life develop, it will help to maintain rather than disrupt the ecological stability of the region".[53]

Fathy's intention was to include in his designs, buildings that would serve in developing the economy of the inhabitants. He also sought to generate income through creating community-based development by building on local knowledge, skills and enterprise. Fathy believed that people should initiate and participate in their own economic development and the recognition of the value of their technology is the necessary first step towards strengthening this technology. He argued that the architect must use his authority to counteract the glamour of imported manufactured products. In addition he must "find out the hidden and dying crafts and bring them to light, revive them, give the craftsman back his lost confidence, and encourage the craft to spread by giving new commissions".[54]

Fathy's concept of village-planning may seem conservative and backward looking but

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52 Nuridin Durkee, Dar Al-Islam: New Mexico. *Mimar*, no. 24, June 1987, p. 13. For a further discussion of the ways in which architecture can be used to modify peoples lives, see Chapter 7, p. 182.

53 Fathy, 1973, p. 62.

54 Ibid., pp. 35-36.

in fact it was conceived with the future in mind, giving a place for the different tradesand crafts in his designs. In New Gourna the site was bounded on two sides by a railway that turned round at the south-east corner. Here the market was situated in a large square area in order to be convenient for the traders to bring and send their goods as well as to provide the main entrance to the village. One would enter the market through a gate, and on the opposite side of the market, a second arched gateway leads into the village. To restore the traditional crafts of the village and develop them, Fathy built a crafts school, which was intended to be both a training centre and a communal workshop (ill. 54). It was situated by the market in order to encourage its sales.[55]

The attempt at reviving the traditional crafts of Gourna was supplemented by building the *khān*, one of the most important public buildings in the village (ill. 53). Fathy argued that in the *khān*, "the new trades that would set up the economy of New Gourna would be taught". It was intended to be occupied by master craftsmen who were to teach a number of apprentices the mysteries of their craft. Fathy also designed an exhibition hall for the products of the village's new crafts (ill. 52).[56] Both the *khān* and the exhibition hall were situated around the main square of the village. As New Gourna was intended to be built of mud-bricks, Fathy believed that incorporating a brickyard in his planning would be an important amenity for the village. It was situated outside the area scheduled for building, so that it would not have to be relocated when its site was needed.[57] Similarly, in order to support the economy of New Bariz village, Fathy also produced sand-brick locally as a new industry for the region.

Fathy argued that giving the future inhabitants of a village the skills and materials was not enough to build it. In order to support the economy of his villages, Fathy created what he called the "auto-construction centre". It was intended to be sponsored by the government and was proposed to provide a village with the necessary equipment and tools for building construction. It was also planned to be offered to the inhabitants in the form of a loan to be paid off from the return of their work. The auto-construction centre

55 Ibid., 1973, pp. 69-70.
56 Ibid., pp. 66-67.
57 Ibid., pp. 89-91.

became an important constituent of the design of Fathy's villages. It was carried out successfully in the construction of the school building of Fares village and the New Bariz village. The idea of this centre was supplemented by establishing an in-service training program in order to get the non-skilled labourers and masons "integrated into the social and the economic web of the community".[58] This program was also used in both the New Bariz and Dar Al-Islam villages and promoted an enterprise for the local craftsmen who shared in the construction of these villages.

Cultural factors

If the demographic, climatic and socio-economic considerations played an important role in Fathy's planning process, the relationship between them was a crucial part of his cultural studies. According to Charles Jencks "A characteristic deficiency of modern city planning... was its inability to provide images of cultural continuity".[59] Fathy believed that "culture is the result of the interaction between man's intelligence and his environment in order to satisfy his physical and spiritual needs".[60] He argued that the peasants couldn't discriminate between unfamiliar different styles and if they abandoned their tradition they would be met by a disaster. Therefore, Fathy advised that the architect should respect the tradition he was invading, because his work in the city was a completely different matter from that involving peasant communities.

> Tradition among the peasants is the only safeguard of their culture... When the full power of a human imagination is backed by the weight of a living tradition, the resulting work of art is far greater than any that an artist can achieve when he has no tradition to work in or when he willfully abandons his tradition.[61]

For Fathy, a seamless continuity with the past as well as housing people in relation to their local and regional history would sustain a successful dwelling. Paolo Portoghesi believes that "any work of architecture belongs to a place, and therefore first of all is 'local'".[62] Fathy's main concern was to confront the invasion of alien cultural values by restoring indigenous Egyptian architecture and crafts. His village designs provided continuity with the past and revived pride in living traditions.

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58 Ms., FAAUC, no. 159, pp. 20-22.
59 Charles Jencks, *Current Architecture*. London, 1982, pp. 158-159.
60 Petruccioli, *Spazio e Societa*, no.17, March 1982, p. 59.
61 Fathy, 1973, p. 25.
62 Christian Norberg-Schulz, *Architecture: Meaning and Place*. New York, 1986, p. 7.

Fathy believed that tradition is the "social analogy of personal habit".[63] His planning concept involved a particular people living in a particular physical environment. In New Gourna village Fathy's main objective was to plan and design the village in harmony with the surroundings as well as preserving its architectural and cultural traditions. This planning approach was not novel, at the time of Fathy, but it has been present throughout human history. Geddes explained that town planning must not force people into new places against their habits, wishes, and interests, but to locate appropriate places where they will be able to flourish. Geddes argued that housing people needed the same care required when transplanting flowers; "instead of harsh evictions and arbitrary instructions to 'move on', delivered in the manner of officious amateur policemen".[64] Like Fathy, Geddes believed that if town planning "is to be successful it must be folk-planning". He also opposed the imposition of Western planning practices onto non-Western societies.[65]

In New Gourna village, Fathy was fascinated by the traditional architecture of Nubia, both forms and method of building, but he did not try to copy them in his designs. He argued that one may use the technique of construction but must "strip from this method all the substance of particular character and detail".[66] The architecture of old Gourna village had nothing distinctive and colourful like that of Nubia, but there are occasional buildings that show a certain purity of form and represented an important part of the Gournis' tradition. For example, the pigeon towers were entirely original and a peasant form invention (ill. 57).[67]

Rudofsky argues that pigeoncotes in Egypt stand out from the domestic architecture. "Whereas our urban pigeons are about as useful as goldfish, to the farmer who lives in the semideserts of the Near East doves are his life insurance".[68] Like Rudofsky, Sir James Richards, who was a close friend of Fathy, believes that the symbol of agricultural stability is the birds and "it is impossible for a young man to look for a

63 Fathy, 1973, p. 24.
64 Jaqueline Tyrwhitt, *Patrick Geddes in India*. London, 1947, p .22. Geddeds's report on the towns in the Madras Presidency, India in 1915, p. 91.
65 Ibid.
66 Fathy, 1973, p. 45.
67 Ibid., p. 42.
68 Bernard Rudofsky, *The Prodigious Builders*. London, 1977, pp. 77-78.

bride unless he possessed at least one pigeoncote".[69] Another interesting feature was the *māzyārāh* (a shaded place to hold the water jar and keep it cold). In old Gourna, the *māzyārāh* took the form of a vault that shaded the water jar from the sun, a somewhat crude arrangement, but quite pretty. In the houses of New Gourna village the vault supporting the staircase offered a suitable place for the *māzyārāh* and provided a deep shade (ill. 58). One side of the vault was also filled in with a mud-brick claustra-work to allow a natural air filter.[70]

One of the most important traditional features of the mosque of old Gourna village was the straight external staircase leading up to the minaret. This form of staircase dates back to the earliest years of Islam and we can still find examples in Nubia and Upper Egypt. In New Gourna village, Fathy adapted the old design of the staircase to the new large-scale mosque (ill. 47). These traditional elements provided a keynote in the new design and were easily incorporated. Fathy's intention to incorporate local forms in his new designs was not a "sentimental desire to keep some souvenir of the old village". His main aim was to preserve for the Gournis their heritage of locally-inspired building traditions and skilled craftsmen.[71]

Fathy followed the same concept in his design for the Sohar village (1973), Oman, where he employed stylistic features from the local architecture of the region such as *bārātsī* (a composite material of chicken wire and split reeds, sprayed with concrete) (ill. 89). For quick assembly and low cost, he was able, with the help of the local craftsmen, to develop the *bārātsī* functionally to cover the market through use of an innovative roof structure of open-ended trusses.[72]

The houses of the Egyptian villages exhibited the full adaptation of the local materials to the purposes of the life of the peasant. Fathy argued that the plasticity and informality

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69 James Richards, Bridegroom's Dowry. *The Architectural Review*, February 1946, p. 60.
70 Fathy, 1973, 42.
71 Ibid., 1973, pp. 42-43.
72 Richards, Serageldin and Rastorfer, 1985, p. 166. For description of the *bārātsī* roof, see Chapter 3, p. 75.

of these houses cannot be produced from a drawing board. "It is conceived as it is built, like a piece of modeling in clay... every irregularity and curve is a reflection of his personality". Nevertheless, Fathy was aware that building a new village is not a simple job, because it would present a big jump for the villagers from a "modeled" house to the "engineered" one. He believed that if this change takes place naturally, this new architecture would grow into a tradition. In New Gourna, Fathy's intention was not to create a tradition for the Gournis because "such presumption would destroy [the Gournis'] artistic initiative and integrity".[73]

In his book *Peasant Society and Culture*, the anthropologist, Robert Redfield, pointed out that in primitive societies there is no technical vocabulary or professional classes, but people have some knowledge of everything and every aspect of their tribal life is everybody's business.[74] Like Redfield, Rapoport, argued that the average family has adequate knowledge, which enables them to build their houses and understand their needs and that certain forms and building techniques resist change and are taken for granted.[75] In preparing the working drawings of New Gourna, Fathy deliberately omitted putting dimensions on his plans because the craftsmen were familiar with every detail of the work. "They knew by heart the proportions of the various rooms and, given the height of a dome or vault, could tell immediately where to begin the spring".[76] Likewise, the original drawings of the Dar Al-Islam village consisted of only five sheets. When Durkee asked Fathy about the drawings he said "I leave this to you and those who work with you".[77] Durkee believed that it was "a measure of the confidence of the architect in the ability of the builders and craftsmen to both realise his vision and allow them the opportunity to add their own vision and skill to the finished work".[78] By sharing with the peasant in the building process, Fathy successfully restored the creative relationship between architect and craftsmen and brought together two members of the dispersed trinity of client, architect and craftsman.[79]

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73 Fathy, 1973, p. 42.
74 Robert Redfield, *Peasant Society and Culture: An Anthroplological Approach to Civilization.* Chicago, 1969, pp. 72-73.
75 Rapoport, 1969, p. 4.
76 Fathy, 1973, p. 38.
77 Durkee, *Mimar*, no. 24, June 1987, p. 13.
78 Ibid., p. 15.
79 Fathy, 1973, p. 38.

Like New Gourna village, the New Bariz village (1967) was another community-orientated project and a further exploration of the aesthetic of tradition. Fathy argued that in the past most peasant societies built their villages by following well-established traditions of design and construction. Today most of these traditions have been lost.[80] But he believed that tradition "is not necessarily old-fashioned and is not synonymous with stagnation... a tradition need not date from long ago but may have begun quite recently".[81] Therefore, Fathy explained that the assistance of specialised architects is necessary to help new societies to revive lost traditions until a new tradition is established. For example, in New Bariz village he set out a training program on building techniques such as the dome and vault construction for roofing.[82] Fathy believed that the individual artist has a duty to keep an established tradition going with his own insight and invention in order to save it from coming to a standstill; "the further a tradition has developed, the more effort the artist must expend to make each step forward in it".[83]

Fathy not only tried to revitalise cultural values in his community villages but also in his tourist villages. In his design for the Nile Festival village (1977-1982) Fathy did not follow the modern character of the existing hotels in Luxor city, which he believed would not offer a desirable visual, environmental and cultural attraction for tourists. His concept was to create a contemporary example of traditional Egyptian and Arabic architecture, which would be appropriate to the character and environment of Luxor.[84] Like New Gourna village, the Nile festival village was also intended to be built of local materials and using traditional construction methods. However, stone would be used for the bearing walls, while the domes, vaults and arches would be made of mud-brick. Openings were to be covered with the traditional fine wood-work such as *māshrābīyyāhs* and claustra-screens.[85] Likewise, in the Journalists' village Fathy devised the style of the village to follow the rural desert style in order to "conform with the God-made environment".[86] He thus employed an authentic architectural style in a

80 Ms., FAAUC, no. 159, p. 21.
81 Fathy, 1973, p. 24.
82 Ms., FAAUC, no. 159, p. 21.
83 Fathy, 1973, p. 25.
84 Ms., FAAUC, no. 233, pp. 2-3.
85 Ibid., p. 5.
86 *Alam Albena*, no. 162, January 1995, pp. 26-27. (in Arabic)

way that both met the design requirements and expressed the local style through a contemporary vision. Comparing Fathy's villages with Doxiadis' Santorini village (1960) (ill. 172), its architects employed primary forms such as domes and vaults as well as the use of simple materials and methods of construction. Although they were, like Fathy, struggling to include the traditional local vernacular forms as well as to achieve an economical building type, they did not follow the traditional way of construction or use local materials. Instead, they used concrete ribs with pumice-block in-fill, while the joinery-work was standardised.[87] Santiago argues that a lot of the housing appears to be arranged following modern planning. "Thus the houses, while individually vernacular in appearance, are grouped and laid out in a manner that is anti-vernacular visually and may also prove to be so socially, as well".[88] Like Fathy, Santiago argues that, carrying out such a project with modern materials and methods of construction represents part of the rapid change that affects all the Greek islands. He also believes that the problems of the reconstruction of Santorini are "clearly well outside the experience of most western architects".[89]

Fathy argued that the architect should respect the work of his forbears and not despise the tradition of his own country in favour of alien traditions. He also wondered why the architect should be so insensitive to the work and ideas of earlier people so as to distort and misapply them. He argued that this would happen when the architect misused an architectural element that had arrived over the years to a perfect size, shape and function by applying it upside down, simply to satisfy his own selfish desire to be noticed.

> If the architect walks soberly in the tradition of his culture, then he must not suppose that his artistry will be stifled. Far from it; it will express itself in relevant contributions to the tradition and contribute to the advance of his society's culture.[90]

In addition to his conceptualisation of the relationship between culture and urban planning, Fathy did not ignore the importance of aesthetic considerations as a substantial and an integral part of the planning process.

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87 The Exploring Eye [Houses of Santorini]. *The Architectural Review*, December 1958, p. 389.
88 Santiago, *The Architectural Review*, March 1960, pp. 208-209.
89 Ibid., p. 209.
90 Fathy, 1973, p. 26.

Aesthetic Factors

Fathy regarded aesthetics as an important factor for architects and planners to consider and that beauty in architecture is a visual quality or effect of form. Fathy explained that beauty is the by-product of many attempts to satisfy other factors, and that to seek intentionally for beauty is not the best way of realising it. However, the aesthetic dimension was not an end in itself, but resulted from applying the principles of design to both buildings and town planning. Fathy explained that aesthetics does not mean "beautiful forms", in the sense of recommending specific shapes, measurements or proportion, but rather that it is a function of form.[91] Fathy argued that aesthetics in classical art has been misunderstood because of formalistic interpretation and analysis; and that architects recognised beauty as a separate quality that could be produced in isolation. He argued that a form of a molecule, plant or man is recognised scientifically as a resultant of certain forces; and in nature there is no distortion because the forces are reconciled in the form. Fathy believed that when

> man shapes an object, he puts himself among the forces, and becomes in fact the determining force. But there is in the whole natural world, of which man is part, a certain underlying order, to which all shapes must conform, or be out of harmony with the universe. Only if it conforms with this underlying order can the man-made shape be as beautiful as the natural shape. Therefore the architect should try to understand this cosmic order.[92]

Fathy believed that the house is "the portrait of its owner with which he faces the community". He considered the architecture of a house, its size and its location in a village as the expression of the owner's personality as well as an indication of the social status of his family. "Unity in variety and not in uniformity" was a fundamental aesthetic concept for Fathy; he explained that there are no two human being alike in nature even if they were twins and physically identical, "they will differ in their dreams". Similarly, the architecture of houses in a village built by their inhabitants emerges from their dreams and therefore no two houses are identical.[93]

In Fathy's villages, the size and position of every building, street, plaza and park were

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91 Ms., FAAUC, no. 51, p. 1.
92 Ibid., p. 2.
93 Ms., FAAUC, no. 159, p. 14.

carefully determined to give the best impression of depth and of an interesting vista. Fathy intentionally neither considered his buildings as the only medium of architecture, nor let his imagination work with only structural forms. But he was able to create work that integrated his buildings into the surrounding spaces, which for him represented the real meaning of architecture. Houses in New Gourna varied in size according to the area of the original houses they were replacing. The plan provided flexibility for altering each house to suit the people who would live in it. Fathy also avoided the trap of unintentional alteration. He applied himself to the problem of arranging a large number of dwellings on different shaped and angled sites. Fathy argued that the achievement of beauty came mainly from arranging these units with pleasing proportions. He also believed that "such a problem is creative and evokes an original and honest answer, while the problem of applying some beauty to a predetermined design can never produce more than a stale and insincere plan".[94] This offered the opportunity for originality in design and visual interest as well as avoiding the trap of the building of "identical dwellings that are often considered to be all that the poor deserve".[95]

Fathy's emphasis on the aesthetic element in planning was grounded in a belief that aesthetic choice in the individual and collective life was a significant and meaningful element because of its creative dimension. For Fathy architecture "is a communal art", because a building in a city or a village is seen by everyone. He explained that bad paintings will end up on the painter's studio wall, and bad music will never be played in the concert hall, but anything that is ugly in a building is a pity, because it is forced upon the community. Fathy believed that an "ugly or senseless building is an insult to every gentlemen passing in front of it; it says: 'This is your worth, Mister'".[96] This explains Fathy's attitudes towards the importance of aesthetic in making the built environment as well as in uncovering its repressed aspects, which would affect people psychologically because ugliness is rejected. Certainly, aesthetics was an important tool which helped Fathy to subordinate his planning approach to the human principles of tradition, human scale, natural environment and spirituality.

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94 Fathy, 1973, p. 73.
95 Ibid.
96 Holod and Rastorfer, 1983, p. 243.

Spiritual factors

Fathy's study of village planning involved not only considerations of man both as an individual and in society, but also as a spiritual being. In the houses of his villages, Fathy brought the sky down to enliven and spiritualise them by using enclosed courtyards.[97] Fathy explained that the Arab saw the sky as a benign aspect of nature and that this gradually developed into a theological proposition in which the sky became the home of the deity. This metaphor was also extended from the courtyard to the dome, which Fathy used extensively in roofing his houses. Like the courtyard, the dome also symbolises the sky through its eight-sided base, which represent the eight angels who support the throne of God. Fathy acknowledged this symbolic dimension and designed the houses to become a model or microcosm of the universe.[98] Fathy also tried to achieve the same atmosphere of peace and serenity in all the other buildings of the villages.

Fathy paid particular attention to man's religion and sacred value. He explained that religious feeling first becomes perceptible as a social phenomenon and then plays an essential role in political life as well as in the shaping of cities and villages. However, to give a spiritual feeling of the holy, religious buildings such as mosques in a Muslim society make use of symbols, sacred geometry and absolute measure. For many centuries religion underpinned town and city planning. Every town or village is arranged around a temple, church or mosque in its centre, so that these became the focus of every sort of activity.[99] The mosque was an essential constituent of all Fathy's community projects and villages, including the tourist villages. In his designs Fathy considered the main spiritual and physical functions of a mosque as a shelter for the worshipers during prayer. All the prayers must direct themselves towards Mecca in Saudi Arabia. The architecture of a mosque was thus determined by this external factor. Because its orientation rarely accorded with the directions of the streets, the transition from the street door to the Mecca-orientated interior poses an interesting architectural problem, which was solved by inventive arrangements of passages and spaces.[100]

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97 For more details about the courtyard, see Chapter 5, pp. 117-119.

98 Fathy, 1973, p. 56.

99 Fathy, Religion and "The City of the Future". Internal Report to the Athens Centre of Ekistics, 28 August 1961. Ms., FAAUC, no. 47, pp. 1-2.

100 Fathy, 1973, p. 74. The orientation of a mosque does not affect the planning of a village or a town, because the orientation of the other buildings depends on the sun and the direction of the wind.

Fathy argued that there are differences between the architecture of a mosque and that of a church. While a church has a centrepiece like the altar, where architecture and ritual meet in a common focus, a mosque has a *qiblāh* (a niche) in one wall to refer to the direction to Mecca. In a mosque the congregation assembles in a few long rows across the width of the building, rather than in many short rows as in a Christian church, this difference being reflected in the shape of their plans. Finally, unlike a church, there are no pictures or statues in a mosque that can help to attract the worshipers during their prayers and this was reflected in the plain walls. However, Arab artists turned all their skills into perfecting their calligraphy; so that the wall is decorated by interlaced motifs of formalised vegetation and the inclusion of the word of God within a narrow frieze.[101] To create such a building, which has a sober and calm air as well as being conducive to quiet meditation and prayer, Fathy considered how the light would fall upon its walls and be distributed in its spaces. In the mosques of the New Gourna, the Lula'at Al-Sahara and the Dar Al-Islam villages, Fathy lit the main prayer halls from windows in the drums of the domes and in some cases by the diffused light coming from the adjacent courtyards. In the Dar Al-Islam's mosque, the dome was supported by vaults, which Fathy stretched beyond their main function by adding openings decorated with claustras (ill. 150). These openings were intended to allow diffused light to enter into the interior.[102]

Besides the importance of the mosque as a religious building in his designs, Fathy also recognised the spiritual development of traditional crafts. Fathy explained that the principle of growth allows for a continuous interaction between man, material and environment. For him "architecture is like the shell of the snail, the soft part secreting calcium carbonates, and by natural forces making the form by movement and surface tension". Likewise, in a village, "the grains would arrange themselves... returning on the soft, living part that created it and gave it form". Fathy argued that for craftsmen, the universe, the sky, the sun, the moon, the wind, their own bodies, brains, hearts and all their reactions are transferred to their fingers, shaping and sculpting the brick and mud. For Fathy ideal architecture is modelled by craftsmen who work in harmony with their world and put something of themselves into the material and give it something which,

101 Ibid.
102 Holod and Khan, 1997, p. 216.

along with the fundamental nature of the material, "would be radiated to man, and would be doing him good".[103]

Fathy argued that when man is handling raw, natural material such as dressing stone, he "is removing what is superficial and preserving what is essential... he is spiritualising himself and spiritualising the stone". Fathy always recalled a story of a man passing three men who are dressing stone. The man asked them, ""What are you doing?' The first said, 'I am making a living.' The second said, 'I am dressing stone.' And the third said, 'I am building a cathedral.'". Fathy believed that only the last one had a sense of what he was doing in the context of his desires together with the capabilities of the material, and "saw beyond merely his own purposes or the technical problem of working with the stone".[104]

However, for Fathy architecture and town planning were the manifestation of metaphysical conditions, where nature, function and space all express intrinsic spiritual qualities. Fathy argued that if a city is perceived as a place "where individual souls and not masses, living people... grow up, live, work... we shall put humanity first". For Fathy the other factors which affect city planning "will fall into place as the tools they are, and not as the determinants... of our planning as often they tend to be".[105] Seen within the context of the modern era, where Wright stated that "modern architecture is organic-architecture deprived of a soul",[106] Fathy also believed that architecture is ruled by "the god Money... and no longer of spirituality".[107]

The preceding factors which shaped Fathy's planning theory indicate that town planning is a highly specialised activity. It also highlighted the importance of the social dimension in the sense that its purpose is the enhancement of human welfare. Franco Bianchini pointed out that urban planners need "the creativity of artists... working in social contexts... the creativity of being able to synthesise; to see the connections

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103 Holod and Rastorfer, 1983, p. 242.
104 Ibid.
105 Ms., FAAUC, no. 46, p. 2.
106 Frank Lloyd Wright, Organic Architecture Looks at Modern Architecture. *Architectural Record*, May 1954, p. 154.
107 Petruccioli, *Spazio e Societa*, no.17, March 1982, p. 51.

between the natural, social, cultural, political and economic environments".[108] Certainly, Fathy's work was motivated by a social vision of considerable depth and exhibited a synthesis of nature, art, climate and culture. His intention was to promote economic and social progress and a high level of employment in order to achieve balanced and sustainable village development. Fathy's conceptualisation of physical planning as the control of complex systems required also an understanding of the dynamics of the other disciplines that concern the human activities. Undoubtedly, Fathy's planning approach unlocked a very important door for architects and planners to create dynamic town planning elements, whose flexibility could allow a new spectrum of possibilities for living. However, Fathy's philosophy, traditional principles and the difficult questions he addressed and tried to find solutions for provided the fundamental links between him and other modern architects as well as highlighting key aspects of his contribution to twentieth century architecture.

108 Franco Bianchini, Cultural Planning and Time Planning in *Social Town Planning* by Clara H. Greed, ed., London, 1999, pp. 195-196.

CHAPTER SEVEN

HASSAN FATHY IN THE CONTEXT OF TWENTIETH CENTURY ARCHITECTURE

Beyond the evident typology in Fathy's buildings and the guiding architectural principles which were pioneered through his work, his architecture was shaped by a conceptual framework which developed an understanding of contemporary responses to modern environmental, urban and societal conditions of existence. Fathy's approach was a transformation of a prevalent modern architecture language to a social metaphor evoking honesty, efficiency and availability. Fathy's vision of architecture also extended beyond the utilitarian and the mundane towards its ability to shape people's lives and contribute to their sense of identity. His concept was that the more people are involved in creating their environment, the more healthy they would be physically and psychologically. This was the standpoint of Fathy's architecture as well as the basic tenant of his beliefs, which Richards believed "was in advance of his time".[1]

The most important contribution of Fathy to twentieth century architecture probably lies in his commitment to regionalism. He pulled together a collection of traditional positions and tendencies towards vernacular forms as well as a celebration of local materials and methods of construction. Fathy's architecture and philosophy also focused attention on particular architectural approaches and themes within scholarly debate and helped bring them onto the architectural agenda. These are earth architecture, self-help building and community architecture and sustainability. Fathy raised questions of entirely different movements and tendencies and his work and philosophy represented a central element in the critical issues and evolution of twentieth century architecture. Without question, Fathy was one of the most significant architects of modern times and he deserves to be seen as a figure comparable in importance to architects such as Wright, Le Corbusier, Gropius and Mies van der Rohe. The fact that Fathy's architecture stands largely in opposition to that of the leaders of the modern movement in no sense reduces his significance, and indeed his ability to resist the pervasive influence of modernism is a measure of his standing within twentieth-century

1 Richards, Serageldin and Rastorfer, 1985, p. 13.

architecture. It is also significant that Fathy's international standing as an architect began to increase at the same time as the contributions of the leading figures of modernism began to be subjected to greater critical scrutiny.

Unlike many of his peers in the twentieth century, Fathy repeatedly questioned the basic assumptions of modern architecture. He continuously re-evaluated the role of the architectural profession, while questioning both the intentions of architectural movements and their cultural relevance in the broader sense. Fathy believed that European and American "New Architecture" and "ubiquitous mass production erodes... culture and environment in the Third World".[2] He always regarded modernism as a destructive power that helped to reduce the world to a hollow sameness. Fathy argued that his ideas differ from those of modernist architects and believed that one should

> differentiate between what is constant and what is arbitrary and spontaneous. Man must not drop the constant in life. If he were to change every minute he would be lost and without reference... But change for its own sake is sacrilege. I feel very inhibited about breaking tradition. Once you lose standards of reference, chaos follows.[3]

The way in which Fathy pronounced the inadequacy of the ideology of modernism in fulfilling human needs attracted the attention of the architectural profession worldwide. By questioning the relevance of modernist solutions to the developing world Fathy not only called attention to the limited range of solutions that modernism was able to offer, but also drew international attention to the larger economic, social and cultural objectives which twentieth-century architecture needed to address. Fathy, in fact, gave a voice to the architectural concerns of a vast number of people for whom modern western architecture remained both alien and ultimately irrelevant.

The assertive individuality of Fathy's concept also provided ample fuel for his critics. But the characteristics of this criticism in itself is testimony to the importance of Fathy's ideology to the architecture of the twentieth century. Like, Kultermann, who believed that today no one can create architecture on a craft basis,[4] Safdie rejected Fathy's belief

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2 Ben Bushaija, Architect and Environmentalist. *Cairo Today*, v. 7, no. 3, March 1986, p. 20.
3 Blumenfeld, *Architectural Association Quarterly*, v. 6, nos. 3-4, 1974, pp. 54-55.
4 Udo Kultermann, *New Architecture in the World*. London, 1976, p. xxviii.

that local materials and traditional building methods, without modern technology, are the answer to the problem of housing in both the city and the countryside.[5] Other academics believed that if it is possible to adapt buildings from past ages in order to serve for the present, it would be unconvincing to build today exactly as in the past. Professor John Habraken of Massachusetts Institute of Technology (MIT) suggests that Fathy's architecture derives its vocabulary from a different age, which represented the lives and attitudes of a specific people. Habraken believes that because conditions have changed, "one cannot rebuild Colonial Williamsburg in the twentieth century and make it work as a vital community, so one cannot re-introduce the building systems of the Nubians or the Fourth Century Copts".[6]

Another aspect of the criticism of Fathy is the attempt of Richards to claim him as a covert modernist. Richards claimed that Fathy's ideals and those of the Modern Movement were similar to an extent "that he might find difficult to accept". Although Fathy was suspicious of the ideology of the Modern Movement, Richards believed that he has been "part of it in the sense that he too aimed at reorienting architecture in the direction of improving human living conditions, especially those of the poor". Richards explained that while Fathy's main concern was to improve the conditions of the rural poor, the modernists occupied themselves with improving urban conditions. Richards argued that the modernists wanted to achieve their objective by using fresh resources, but their "philosophy required a total break with the past, whereas Fathy has looked always for continuity [with the past]... But the Modernists' break with the past proved disastrous to the relationship between architecture and the public".[7] Richards is, in effect, arguing that a similarity of social intent equals a similarity of architectural intention. Fathy would, however, have rejected this separation between the social and architectural realms. Although Fathy would have agreed with the modernist position that architecture has the potential to improve peoples' lives, he always took as his starting point the way of life of the people he was attempting to help.[8]

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5 Safdie, *New York Review of Books*, 11 December 1975, p. 6.

6 Quoted in Felicia Clark, Appropriate Invention, review of *Architecture for the Poor*, by Hassan Fathy. *Architectural Record*, v. 168, January 1980, p. 189. For other criticism of Fathy, see Introduction, p. 8 and Chapter 4, pp. 92-93.

7 Richards, Serageldin and Rastorfer, pp. 10-11.

8 For a further discussion of the ways in which Fathy expressed and supported the social structures of families and tribes, see Chapter 6, pp. 163-166.

Richards not only believed that Fathy's objective coincided with that of the pioneers of the modern movement, but also suggested that Fathy's way of expressing form, materials and structure paralleled the path of modernism. Steele argues that Richards's claim seems "inconceivable", because Fathy always rejected the concepts of both the founders of modernism and the International Style. However, Steele believes that "Richards can only be faulted for not going far enough" since Fathy "would [not] use the same methods he professed to abhor".[9] In fact, one should consider in-depth the potential of Richards' views rather than interpreting its surface meaning. It would be pointless to try to define any similarities between Fathy's style and that of the founders of modern movement because the style and content are to a large extent independent of each other. But other similar themes and design strategies can be found in their work, irrespective of the external appearance of their buildings.

The concept of the architectural system, which offered the basis for creating a satisfying architecture, was as fundamental to both Le Corbusier and Wright as to Fathy. Both sought an integral co-ordination of structure and form refined by aesthetics. In his houses of the 1940s, Fathy had been approaching a similar consciousness of independent systems combined with a symbolic architectural system. Just as Le Corbusier created a new and modern architectural system depending on the opportunities afforded by the new materials and new ways of building, Wright also formulated a new architecture according to an architectural system with his 'Prairie houses'. Fathy also developed his own system of construction through the principles of the Islamic-Arabic house and the Egyptian vernacular. The architectural style of both Wright and Le Corbusier was to be achieved through standardisation, which implies the separation of building elements into independent systems. It is not surprising, then, to find that Fathy's houses also were manipulated by coordinated systems of almost independent elements such as the *mājāz*, the *qā'āh*, the *dūrqā'āh*, the *'īwān* and the courtyard. In fact, these repetitive elements in Fathy's work represent a vernacular version of standardisation. Undoubtedly, the similarity in methods of design of both Fathy and the founders of the Modern Movement, were not acknowledged because they had worked in different contexts.

9 Steele, 1997, p. 183.

Placing Fathy in the context of idealists such as Wright and Le Corbusier may indicate, to an extent, that there is some truth in Richards's assessment. One also can understand that Richards felt that Fathy's contribution has something that modern architecture lacks. In turn, he wanted to maintain the validity of the modern movement and to deflect the criticism of it implied by Fathy's architecture as well as in his direct comments. Richards believed that the modern movement was more encompassing than Fathy himself admitted. Certainly, Fathy's approach, which is most commonly understood as a stylistic phenomenon, should be understood first in the context of what the modern movement both opposed and affirmed. Eugène Viollet-le-Duc acknowledged the inability of the nineteenth century to find forms appropriate to the new social, economic and technological conditions of the modern world. He believed that these new forms could be created if one returns to the past and understands its underlying principles and processes rather than its external effects. Viollet-le-Duc thus defined a central problem which architects of the early twentieth century faced; the need to formulate a style appropriate to modern conditions. Twentieth century modernist architects became aware that tradition should not be totally rejected, but should be considered a rich source from which one can create new forms. As Curtis explains, "it was not tradition that was jettisoned, but a slavish, superficial, and irrelevant adherence to it".[10]

In retrospect, each of the masters of modern architecture, including Aalto and Kahn arrived at an individual style through a traditionalist phase. This reveals the foundations on which they built, and suggests the source from which they drew their principles. In this context, however, one can recognise the similarity between Fathy and the modern movement architects in terms of advocating a return to the first fundamental principles of architecture, but there are also key distinctions between them. The modern movement opposed the application of past building technology and adopted machine fabrication, while Fathy's work employs traditional techniques and materials and is handcrafted. The modern movement affirmed the creation of forms appropriate to the modern age by allowing them to be thought of in new ways as well as giving the result universality, while Fathy opposed unnecessary change and the concept of universality. In this, Fathy's disagreement with modernism was not a matter of using modern or traditional

10 Curtis, 1987, pp. 16-19.

forms and building techniques, but his belief that architectural styles are not universally applicable and that the uniqueness of different parts of the world should not be denied.

Fathy's conflict with modern architecture can be recognised in three main areas. These are the impact of modernisation on Third World countries during the post-colonial period, the impact of modern architecture on the symbolic meaning of the vocabularies of religious buildings and his rejection of the idea of an International Style. The first issue was the phenomenon of introducing modernism to different cultures which began during the post-colonial period in the early 1950s and 1960s. A growing body of literature in the 1970s gave rise to issues concerning the impact of Western ideas, as well as their performance and limitations. Critics began to investigate and analyse the architecture and urban design of these countries because they were the most visible manifestation of the influence of the new concepts of the west. Some critics praised the west for bringing the new architecture and technology to these far away countries, while others were very critical to the undesirable effects of introducing these western ideas in destroying indigenous culture.[11] Fathy argued that developing countries in general, and the Arab world in particular, have undergone a rapid transformation in many aspects, including technology, economy and culture. For Fathy, the most important aspect of change was that "from tribal to a state organised socio-economic system and from native to Western directed technology in building".[12]

In retrospect, this problem of alienation was the result of both foreign colonial domination in the past and the impact of the Industrial Revolution in changing the socio-economic and cultural structures of these countries. In his *The Wretched of the Earth* (1967), Frantz Fanon explained that colonialism planted "deep in the minds of the native population the idea that before the advent of Colonialism their history was one which was dominated by barbarism".[13] Consequently, after these countries gained their independence, they adopted alien styles in their architecture and town planning rather than reacting to their own environment and respecting their cultural heritage. In spite of the overt form of independence of colonialism, Fathy argued that the countries which

11 Tasleem Shakur, East Goes West. *Mimar*, v. 11, no. 40, September 1991, p. 30.
12 Fathy, Dwelling in Developing Countries. A Paper Submitted to the Thirteen International Course in Criminology Held in Cairo (U.A.R.), 22 June - 10 July 1963. FAAUC., Ms., no. 69.
13 Frantz Fanon, *The Wretched of the Earth*. Middlesex, 1967, p. 171.

the West preferred to call the Third World, are now experiencing another phase of "auto-colonialism". Fathy explained that auto-colonialism is a process in which the people of a country impose on themselves an alien life style which helped in destroying their own culture. Fathy also believed that auto-colonialism "is worse than colonialism... while in colonialism a foreign power forces its values on another country here a free people impose these on themselves".[14]

In confronting the phenomenon of auto-colonialism, Fathy believed that an architect, building for peasants, is in a unique position to revive their faith in their own culture. He believed that if the architect admired the local forms of the peasant and incorporated them in his design, the peasant will respect his traditional forms and appreciate the craftsman's work simply because they are "respected by a real architect". Therefore, Fathy wanted to avoid the prevalent attitude that the peasant community has nothing worth the consideration of professional architects and planners. His main aim was to "bridge the gulf that separates folk architecture from architect's architecture". In his work, Fathy intended to provide a solid and visible example of how to link these two architectures by applying features common to both the peasant as well as the architect. On the one hand, the villagers could recognise familiar features from which they could increase their understanding of the new. On the other, the architect would be able to test the truth of his design for the place and the people against the forms and values implicit in their vernacular structures.[15]

Fathy's early anticipation of the destructive effect of auto-colonialism, his vision that more lessons can be drawn from the traditional and historical buildings whether in an abstract manner or as a manipulation of signs and references and his search for a modern expression of national identity, have been felt since the early 1970s. In this period, there has been a remarkable tendency towards the rejection of the irrelevant models of modernisation in favour of local traditions, especially in the Third World. Chris Abel explains that after "being brainwashed for so long into thinking that what is West is best, the change in attitude is a significant one".[16] Likewise, Curtis believes that

14 *The Statesman*, 31 October 1980, p. 3.
15 Fathy, 1973, p. 43.
16 Chris Abel, Regional Transformations. *Architectural Review*, November 1986, pp. 43.

the answer to this major change in architecture is now being felt worldwide and that the world is nearer to the beginning of a traditional architecture than the end of one.[17] Undoubtedly, this reveals that Fathy's intervention, his pragmatism, and his social and cultural idealism greatly contributed to bring the problem of indigenous building traditions out in the open and to the attention of the wider architectural community.

The second issue, which reflects Fathy's disagreement with modernism, is that the traditional forms of religious buildings were also affected by modern architecture. Fathy argued that in the modern era, religious architecture has declined because of the socio-economic and technological changes, which "weakened the religious sense in man, and replaced faith and revelation with study and experiment".[18] He was very critical to those modernist architects who design religious buildings without fully understanding both the traditional language of forms and their symbolic meaning. Unlike most modernist architects, Fathy respected the symbolic meaning of the vocabularies of religious buildings. He believed that if one looked beyond forms, one would find out that they were the result of faith. Just as the Muslim architect expresses his faith in his religious buildings so too does the Byzantine architect in the design of the basilica. In basilicas, like mosques, the hemispheric form or dome was employed as a symbol of the sky, and the square to indicate the earth.[19] For Fathy, sacred art and architecture cannot be articulated through profane elements because every element and measurement should have a meaning regardless of its physical or aesthetic property; therefore it must be carefully chosen.[20]

Fathy argued that in Egypt, as in much of medieval Europe, the sacred craft-guilds with their preserved craft secrets held a higher position than the profane guilds. Therefore, Fathy believed that the progress of architecture should be judged by its temples, cathedrals and mosques.[21] In the past, Fathy argued, building a city depended upon the temple. Every action, including the siting and the orientation of the building was a sacred action, deliberately performed according to esoteric laws. This can be detected,

17 Curtis, 1996, p. 7.
18 Ms., FAAUC, no. 47, p. 4.
19 Ibid., p. 3.
20 Ibid., p. 1.
21 Ibid., p. 4.

for example, in the layout of the Pharaohs' temples of Egypt, as well as the buildings of the Acropolis of Athens. Fathy explained that cathedrals also dominated cities by their scale, style and features such as towers, which were different from those of the houses around, yet part of the same culture.[22]

Fathy criticised those architects who regarded "a church as an excuse for a display of virtuosity" and produced "extraordinary creations like Le Corbusier's chapel at Ronchamp or [Oscar] Niemeyer's church in Brazil". Fathy described the roof of the Notre Dame du Haut chapel (1950-1954) as "a nun's headdress", which was well known to the medieval builders, but not used for churches (ill. 173). Fathy recognised that Le Corbusier "broke up the rose-window of the normal church and stuck it in bits all about the wall, thus making nonsense of its symbolism of unity".[23] Fathy described the ceiling in Ronchamp as "sagging and slanting downwards at the same time", which gives the visitor a feeling that the roof is caving in."[24] Fathy also criticised Niemeyer who, in his Saint Francis of Assisi (1943), Pampulha, State of Minas Gerais, "has made a downwards tapering tower that points the eye towards the Underworld instead of up towards Heaven" (ill. 174).[25] Saint Francis church was a controversial building. Its forms were seen as unrepresentative and did not celebrate the "Glory of God" which was the main role of the Gothic cathedral.[26] Fathy believed that both the chapel at Ronchamp and Saint Francis church are irreligious because their architects have "the attitude of a stage-designer making a set for a religious play, rather than of a sacred craftsman".[27]

Oleg Grabar questioned why "an architect as sensitive and cultivated as the late Hassan Fathy was very critical of Notre Dame du Haut".[28] Fathy explained that although Le Corbusier was a "man of good taste" and a sculptor, his Notre Dame du Haut chapel, generally acclaimed as one of the masterpieces of twentieth-century architecture, "has nothing to do with masses or with the clergy". Fathy argued that Le Corbusier was

22 Ibid., p. 2.
23 Ibid., p. 3.
24 Blumenfeld, *Architectural Association Quarterly*, v. 6, nos. 3-4, 1974, p. 55.
25 Ms., FAAUC, no. 47, p. 3.
26 It was suggested that the church of Saint Francis should be demolished and replaced by a replica from the colonial town of Ouro Preto, see Stamo Papadaki, *Oscar Niemeyer*. London, 1960, p. 24.
27 Ms., FAAUC, no. 47, p. 3.
28 Martin Frishman and Hassan-Uddin Khan, *The Mosque*. London, 1994, pp. 242-243.

"heedless" of the religion as well as of the canons of the sacred art of architecture, which was evident in the lack of the symbols of a church.[29] Le Corbusier himself wrote; "I have not experienced the miracle of faith but I have often known the miracle of inexpressible space, the apotheosis of plastic emotion".[30] Curtis's view that at Ronchamp, Le Corbusier "sought to evoke religious emotions through the play of form, space, and light, and without recourse to any obvious church typology" supports Fathy's analysis of the building, although it is not presented as a criticism of the Swiss architect's work.[31] The Chapel at Ronchamp was also criticised by architects from the West, although their concerns tended to focus on issues of form rather than symbolism. James Stirling (1926-1994) explained that "the forms which have developed from the rational and the initial ideology of the modern movement are being mannerized and changed into a conscious imperfectionism". Although, Stirling believed that Le Corbusier produced a masterpiece of a unique order, he questioned, "whether this building should influence the course of modern architecture".[32]

Fathy also opposed the idea of the involvement of western architects in the design of religious buildings of different cultures. For example, Gropius's mosque in the University of Baghdad in the 1960s was criticised by Fathy as well as other architects from the west. Fathy explained that the shape of the mosque featured a dome put straight on the ground, "as if the walls have sunk into the earth, or as if the dome is waiting to be picked up and put in place". For Fathy, the "ground is for the feet; the dome symbolizes the sky, and to put it in the dust is a blasphemy, nothing less; it is vulgar, offhand and irreligious action".[33] Like Fathy, Curtis believes that Gropius's mosque exhibited "a bogus historicism" and was "very close to the spirit of a Hollywood production of the Arabian Nights". Curtis argues that when the western architect is involved in the design of religious buildings such as mosques, then, "the conflict between new and old, imported and indigenous, was at its most extreme". He explains that if western architects employed the principle of the traditional type they might produce a sham, for their vocabulary and structural system were not traditional,

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29 Blumenfeld, *Architectural Association Quarterly*, v.6, nos. 3-4, 1974, p. 55.
30 Quoted in, Curtis, 1987, p. 273.
31 Ibid., p. 273.
32 James Stirling , Ronchamp: Le Corbusier's Chapel and the Crisis of Rationalism. *The Architectural Review*, v. cxix, no. 711, March 1956, p. 161.
33 Ms., FAAUC, no. 51, p. 5.

and the forms lacked their symbolic meanings.[34] However, one can understand that, even if architects were religious persons, but they only adhered to modern vocabulary, their buildings would not be religious. In fact, when designing a religious building, architects should establish architectural language that both reflects the spirit of their time and progress and respects the sacred geometry and religious symbolism.

The preceding discussion of Fathy's attitude towards religious buildings is relevant for the architecture of the late twentieth century. It raises essential issues that architects should achieve the continuity of key symbolic elements when approaching the problems of designing a religious building. In fact, the depth of their understanding of the implied meaning of these elements is the only way of expressing their creativity as well as realising authenticity rather than kitsch in their buildings. Fathy's thoughtful views on symbolism are a contribution to the debates about meaning in architecture in architectural circles. This can be recognised in the post-modern era where architects try to adapt the architectural vocabulary of the past to respond to contemporary need as well as reflecting contemporary sensibilities. However, Fathy's message was a call for understanding the heritage of the past as well as the reality of the present. In fact, Fathy's emphasis on the need to understand the symbolism of the forms being used was an implicit criticism of much post-modern architecture.

Finally, Fathy's continuous opposition to the International Style and the phenomenon of universality in architecture is likely to be his most important contribution to the debates over the development of twentieth-century architecture. Fathy distrusted the inability of twentieth-century architects to answer the specific environmental issues of particular regions and believed that the answer must lie in the recreation of forms true to the region as well as to methods of construction. He valued architecture that is rooted in the location and the culture of a region, as opposed to an imported internationalism, rooted in a common technology rather than a common humanism. Fathy explained that if something occidental was put in an oriental environment, it becomes false and cannot have a universal quality, because architecture should have reference to the physical,

34 Curtis, 1987, p. 364.

cultural and political contexts that envelop it. It is for this reason, Fathy believed that one would never have a universal architecture.[35]

Fathy believed that universality could be achieved "if there is an underlying unity in *diversity*, not in *uniformity*". For Fathy, architecture will be false and probably made for financial gain if in the name of "uniformity", one built in Africa, India or Egypt, something that has been designed in a European country. "So what commonly passes for universal architecture is false: there doesn't exist a universal architecture".[36] William Mitchell, Dean of MIT School of Architecture and Planning believes that Fathy "was absolutely right... It is crazy to build the same kind of building in New York and Cairo. It makes no sense at all".[37] Fathy argued that architecture is

> universal in the sense that when a man reacts concretely to his environment, the result is never the same, neither in the East nor in the West. If the solution is right for the East, it becomes universal; if it's right for the West, it becomes right at the universal level too – because you are dealing with a specific case which becomes a particular example of the universal.[38]

From a 1960s standpoint, Fathy's attitude towards universality coincided with the increasing interest in traditional architecture and cultural issues which has sprung up among architects, who broke away from the ideas that were promoted by the first generation of modern architects. This period witnessed a strong rejection of the tenents of the International Style, whose buildings were regarded as unresponsive to the surroundings as well as less demanding of creativity. This disintegration has been a response to the obvious impact of modern architecture on the forms of cities around the world. The challenges to the orthodoxy of the Modern Movement and the International Style were heightened with the publication of a series of influential books in the 1960s including, Jane Jacobs' *The Death and Life of Great American Cities* (1961), Robert Venturi's *Complexity and Contradiction* (1966), Aldo Rossi's *The Architecture of the City* (1966) and Hassan Fathy's *Architecture for the Poor* (first published as *Gourna: A*

35 Petruccioli, *Spazio e Societa*, no. 17, March 1982, p. 57.
36 Ibid.
37 Author's interview with William Mitchell, on the occasion of his public lecture at Misr International University, Cairo, on 24 January 2000. The lecture was an introduction to the ArchNet Project, an internet based network for the architectural community, sponsored by the Aga Khan Trust for Culture.
38 Petruccioli, *Spazio e Societa*, no.17, March 1982, p. 57.

Tale of Two Villages in 1969). While there is no connection between these books in terms of their contents, they have many issues in common which changed attitudes towards modern architecture.

Jacobs' book was the first prediction of the terrible human consequences coming from the concept of universality in city planning. Like Fathy, Jacobs believed that modern architecture and urbanism lacks the use of social analysis and that late modernist theories were inappropriate to the urban built environment. She also argued that modernist architects followed the principles of modern movement planning rather than the nature and character of their own urban neighbourhoods and built "low-income projects that become worse centres of delinquency, vandalism and general social hopelessness than the slums they were supposed to replace".[39] Jacobs' ideas corresponded to that of Fathy's village-planning, especially his New Gourna village (1945-1948) and the New Bariz village (1967), where he rejected the universal planning-principles of modernism in favour of the Islamic-Arab city planning which underlined a host of social issues.[40]

The 1960s also witnessed another stream of condemning modernism and the International Style by emphasising the importance of vernacular architecture. Before the publication of Fathy's *Architecture for the Poor*, Bernard Rudofsky's *Architecture without Architects* (1964) appeared to break down narrow concepts of the art of building by introducing the vernacular architecture of different parts of the world. Rudofsky believes that the "vernacular is much more than a style; it is a code of good manners that has no parallel in the urban world".[41] When we link the worldwide interest in vernacular architecture, which was represented by Rudofsky's magnificent exhibition in 1964, or by Myron Goldfinger in his *Villages in the sun* (1969), Fathy's contribution to vernacular architecture was more than 30 years earlier, when he presented his work in the Mansoura exhibition in 1937. Fathy's work in New Gourna of 1948 also exhibited an extreme responsibility toward authenticity in architecture which can be the basis for today's aspiration of an architecture rooted in local heritage as well as for continuity

39 Jean Jacobs, *The Death and Life of Great American Cities*. New York, 1961, pp. 4.
40 For detailed discussion of Fathy's village-planning, see Chapter 6.
41 Rudofsky, 1977, p. 235.

into the future. Undoubtedly, Fathy's simple compositional technique and his ability to recreate the essence of a tradition without pastiche epitomise the strength and endurance of the vernacular.

Fathy's early response to the vernacular also corresponded with the prevailing historical and cultural atmosphere in architecture, when regionalism emerged within architectural discourse from the late 1960s onwards. The result was an unmistakable deviation from the International Style with its perfect glass and concrete box to more contextual forms. Regionalism, which is the exact reverse of the phenomenon of universality, evokes responses to the essence of particular places, cultures and climates within a modern context. Certainly, Fathy's visionary understanding of the importance of restoring the harmony between people, artefacts and nature played an essential role in articulating the basic theory of regionalism and bringing it under serious discussion in the late twentieth century. Curtis believes that any "discussion of regionalist values in the past few decades must give the practice and theories of Hassan Fathy the most serious attention... the Fathy philosophy contains a moral plea in favour of preserving age old adaptations from rural culture".[42] This is why Fathy's breakthrough must be considered in a broader context of emerging regionalism in many parts of the world.

The preceding discussion demonstrates the value of Fathy's ideas in both explaining the importance of the architecture of the past and in responding to the crises of modernism in architecture. From the vantage point of the present day, it is possible to see how the 1960s constituted a sort of turning point in the evolution of twentieth-century ideas about human needs and requirements and that Fathy's architecture and philosophy was part of the mainstream of the architectural profession. Undoubtedly, Fathy's critical evaluation of the modern movement and the International Style stimulated change and indicated that a renewed understanding of human architecture is not only possible, but also present and emerging. This attitude towards humanistic architecture began to be felt with the development of the post-modern movement in the early 1970s. Architects

42 W. Curtis, Towards an Authentic Regionalism. *Mimar*, January / March 1986, p. 26. Views on regionalism, see also, Peter Davey, Regional Meaning. *The Architectural Review*, November 1990, p. 35 and, Kenneth Frampton, Towards a Critical Regionalism: Six Points for an Architecture of Resistance, in Hal Foster (ed.), *The Ant-Aesthetic: essays on postmodern culture*. Washington, 1983, pp. 16-30.

and planners have turned to this new architecture which responded to the public concerns and interests, as well as regained an integral social role for itself. Post-modernism is a historical period with a specific relationship to modernism. It was a pluralistic period that implied multiplicity of architectural issues and tendencies which were developed upon the limitations of the theories of modern architecture in addressing issues concerning meaning in architecture.

As function was the essence of the modern movement, meaning in architecture was central to the discussion of post-modernism. The communication of meaning is part of type, which creates continuity with history. Yet, the reappraisal of earlier work that looked for continuity with cultural tradition was one of the advantages of post-modernism, which placed a higher value on form than on function.[43] However, Fathy's repetition of vernacular forms along with the use of practical traditional constructional technique in his work underlined post-modern thinking about typology. There are also more subtle lessons to be found in Fathy's work that were equally important to post-modernism including the perception of buildings as a composition of unified elements working together, as well as the need to clearly express the function of each element. Fathy's criticism of modern architecture as well as his attempt to define an authentic traditional architecture, which seemed seriously unsound in the 1950s and the 1960s, has been given extra weight by architects and historians of this period.

Shortly, after the publication of Fathy's *Architecture for the Poor*, Charles Jencks's *The Language of Post-Modern Architecture*, appeared in 1977 to reinforce the sense of humanity in architecture. Jencks acknowledged Fathy's traditional approach in building the New Gourna project and recognised the similarity between Fathy's approach and post-modern architecture, as long as both are concerned with vernacularism, contextuality, metaphor and symbolic architecture. During the post-modern era, neo-vernacular style represented the architect's reaction against modern architecture and provided "an acceptable model for design... as long as it is underplayed and unselfconscious".[44] For Jencks, Fathy's experiment in New Gourna represents an

43 Kate Nesbitt, *Theorizing A New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995*. New York, 1996, pp. 44-45.

44 Jencks, 1982, p. 153.

example of rediscovery of the vernacular as well as an example of a self-build project. He explained that New Gourna is not only far cheaper than any other similar modern village, but also more varied and delightful. Jencks believes that "Gourna proves it can be done, but where is the western barefoot architect?"[45]

As Fathy's architecture and ideas conformed to the postmodern concepts and interests, his aspiration of realising architecture that is environmentally relevant to the region echoed the more recent movement of ecological or sustainable architecture, which has emerged since the energy crisis of the 1970s. This movement caused many of the assumptions underlying contemporary architecture to be questioned and produced experimental, ecologically motivated models. Ecology is the relationship between things in the natural world, while architecture is the mankind's attempt to dwell in nature. However, eco-architecture or sustainable architecture is the product of the interaction between nature and human's needs, based on respect for human life and the natural world. Sustainable architecture can also be defined as architecture that meets the needs of the present without compromising the ability of future generations to meet their own needs. However, Fathy's considerations of the environment, the natural forces and the use of low technology in his designs in the 1940s can be seen as an early anticipation of the eco-architecture movement of the 1970s. Ecological architecture was implied in Fathy's view of a building as a process more than a product. For example, he derived low-technology from the use of vernacular forms which have environmental functions such as the wind-catcher and the courtyard in traditional Arabic architecture.

The issue of eco-architecture has been raised with the publication of a number of books during the 1960s, including Ian L. McHarg's *Design With Nature* in 1969. It was one of the most widely used ecology-inspired books of this period which created an awareness of landscape, geographic and natural features. McHarg believed that the form of a city is "derived in the first instance from geological and biological evolution, existing as a sum of natural processes and adapted by man".[46] Although McHarg was one of the first people who had drawn attention to eco-regions, Fathy was there twenty-five years before him creating buildings integrated with both their natural environments and

45 Straight Revivalist, 'Popular' and Traditionalesque. *Architectural Design*, v. 48, no. 1, 1978, p. 21.
46 Ian L. McHarg, *Design with Nature*. New York, 1969, p. 175.

ecological regions. This integration is evident in all Fathy's planning and building designs where he provided a means of natural temperature control in order to avoid the use of mechanical equipment. Fathy believed that technology should be subjected to the economy, materials of a particular region and the human response to the environment, in order to preserve traditional values at the same time as exploiting the advances of science. Fathy believed that modern science "can be applied to various aspects of our work, while it is at the same time subordinated to philosophy, faith and spirituality".[47]

Fathy believed that the characteristics of modern architecture, such as wide windows and glass-and-concrete structures made no sense in extreme heat, especially in societies with time-honoured courtyard spaces which proved a well-established device for reducing the heat of the sun. The appropriateness of glass-curtain-walled, air-conditioned office blocks is now being questioned worldwide, because they require an enormous amount of energy to maintain internal environmental comfort and because they detach their users from the external environment. Fathy accused the architect "who builds a sort of furnace and then brings in a vast refrigerating plant to make it habitable [of] over-simplifying the problem and... working below the level of architecture".[48] Davey not only acknowledged the accuracy of Fathy's analysis of the issue but also acknowledged "how little his perception has been understood".[49]

Unfortunately, the majority of architects have not yet understood the poetic potential of integration between modernity and ecology and when they do, Susannah Hagan believes, "the solutions will be as various as architects are themselves, but contained within a new language of symbiosis".[50] This new language will be harmonised when architects also recognise the distinction between sustainable and ecological architecture. Ecological architecture deals with materials and their relationship to environmental issues, but devoid of theoretical or philosophical depth, in the sense that it does not address the way human beings relate to nature. Sustainability is a concept which comprises both ecological concerns and other social, economic and cultural issues,

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47 Quoted from Hassan Fathy's unpublished lecture at Dar Al-Islam, Abiquiu, New Mexico, June 1980, in Steele, 1997, p. 12.
48 Ms., FAAUC, no. 44, p. 12.
49 Peter Davey, An Intemperate Argument. *The Architectural Review*, July 1994, p. 5.
50 Susannah Hagan, Vers Une Architecture Verte? *The Architectural Review*, October 1993, p. 73.

which were at the core of Fathy's architecture as well as his planning approach. As the analysis of Fathy's buildings revealed architectural vocabularies (courtyard, *māshrābīyyāhs*, *mālqāf*, etc.) responsive to the environment and achieved thermal comfort,[51] the principles of his town planning approach also constituted a framework for understanding planning for sustainability.[52] Sustainability in planning could be recognised in Fathy's response to the socio-economic and cultural considerations of a community. Fathy's concern was to build economically self-sufficient villages as well as to house people in relation to their local and regional history by restoring cultural values, indigenous architecture and crafts, people's habits and customs and the structure of society.

Ironically, although Fathy's efforts in creating sustainable improvement in the human condition were recognised, his contribution in the area of sustainable architecture was not acknowledged in many of the more recent architectural publications on the subject, including *Green Architecture: Design for a Sustainable Future* in 1991, by Brenda and Robert Vale. Although the Vales discussed the future interaction of humans and the environment in the work and writings of many architects, including Le Corbusier, whose contribution to the area of eco-architecture was relatively limited, they completely ignored Fathy's vast contribution, which had culminated in the publication of his *Natural Energy and Vernacular Architecture: Principles and Examples with Reference to Hot Arid Climates*, a seminal book on environmental and natural energy studies, published for The United Nations University in 1986. Fathy's environmental studies were also overlooked in other publications, including Dean Hawkes, *The Environmental Tradition: Studies in the architecture of environment* (1996) and Andrew Scott, *Dimensions of Sustainability* (1998). Despite this disregard, Fathy's work as well as his philosophy inevitably provides a basis for understanding the complex relationship between the built and natural world.

The sustainable architecture movement also witnessed an international interest in reviving earth architecture. Certainly, Fathy's realisation of mud-brick buildings stimulated renewed discussion of developments which recognise earth as an essential

51 See Chapter 5.
52 See Chapter 6.

factor for creating sustainable architecture. In addition to reconsidering earth construction for its thermal qualities and the small amount of energy needed for the production of adobe-bricks, a revival of adobe architecture emerged in underdeveloped countries, where Fathy's ideas found a home. Houses continued to be constructed in earth by their future inhabitants to counter both the impact of modernisation on building materials and methods of construction and the adoption of western models. This growing concern with earth building worldwide reveals the significance of this substance to future generations to meet their own needs. It also shows Fathy's farsightedness in realising the richness of earth in creating sustainable architecture as well as in alleviating poverty.

Although Fathy is recognised as the prophet of mud architecture, it has not only an ancient history worldwide,[53] but also a significant modern history that has been virtually ignored in studies of both twentieth century architecture and Fathy alike. The Second World War and its aftermath encouraged not only Fathy to call for construction in earth, but also other architects worldwide. The English architect and engineer, G. F. Middleton (1900-1956) experimented with this material to create earth roads, dams and military buildings in Australia. Like Fathy, Middleton was fascinated by the earth houses of the Australian countryside and became interested in earth as a building material. Coincidently, in 1946 he too began research on earth construction at the time when Fathy was building the New Gourna village (1945-1948). In contrast, Middleton's research was limited to building earth walls only, while Fathy developed his experiments and constructed mud-brick roofs without centring. Although Fathy was experimenting with this material from the early 1940s, and his New Gourna village was featured in the *Architectural Review* in 1947, Middleton received early recognition and became the first international expert on low-cost housing at the United Nations from 1952. Consequently, Middleton was able to publish his book *Build Your House of Earth* in 1953, and it became one of the classic works on rammed earth and mud-brick.[54]

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53 The earliest evidence of construction in sun-dried mud bricks was found in Jericho in the tenth millennium BC. In the third millennium BC both the South American in the Chicama Valley of Peru and the Mesopotamians of Eridu, now in Iraq, invented the box mould in order to form earth bricks for the construction of walls. While the Romans and Phoenicians brought rammed earth construction to Europe, the Arab conveyed their skills in earth architecture to South, Central and North America. See, Ruth Eaton, Mud: An Examination of Earth Architecture. *The Architectural Review*, October 1981, p. 222 and David Easton, *The Rammed Earth House*. Vermont, 1996, p. 4.

54 See the revised edition of G. F. Middleton, *Build Your House of Earth*. New South Wales, 1979.

A large number of the modern movement figures in western architecture, including Rudolph Schindler (1887-1953), Wright and Le Corbusier experimented with mud construction as well as exploring versions of the primitive and the vernacular. For example, in 1915 the Austrian architect Schindler, who was fascinated by the vernacular adobe architecture in the American west, designed an unrealised earth-residence for T. P. Martin in Taos, New Mexico (ill. 175), where Fathy later built his Dar Al-Islam mosque (1980). In this project Schindler combined features of New Mexican traditional architecture, such as the courtyard layout, and Wright's Prairie houses.[55] Likewise, in 1941, during Fathy's early experimentation with mud buildings, Wright designed the Cooperative Homesteads project (1941-1945), inexpensive houses to be built by their prospective residents in Detroit, Michigan (ill. 176). The project was intended to be built of rammed-earth but only one prototype-house was built and the project was abandoned for lack of cooperation. [56]

At the same period, Le Corbusier also showed a similar interest in back-to-earth philosophies and examined mud as a building material. In 1940, before the invading German army, the migration to Southern France caused a housing problem. Le Corbusier responded to solve this problem by suggesting plans for what he called the 'Murondins' Houses'. These were self-build housing units and schools to be constructed in sun-dried mud-bricks and covered with grass. Like Fathy, Le Corbusier believed that mud-brick constructions "blend naturally into the countryside allowing picturesque groupings, regardless of siting".[57] Unfortunately, although Le Corbusier's scheme was attractive to the traditionalist, it remained conjectural. Coincidently, during Fathy's work in New Gourna, Le Corbusier was also preparing the designs of the Sainte-Baume shrine (1948) near Marseilles for Edward Trouin, who wanted to save the countryside of La Sainte-Baume from speculative builders (ill. 177). It was intended to be constructed of rammed-earth walls as the basic structure, grass-roofs and wooden shuttering. Although it was never built, Le Corbusier believed that with "such an architecture the noblest and greatest town plans can be achieved, deprived of emphasis but with inherent

55 David Gebhard, *Schindler*. New York, 1971, p. 30.
56 Yukio Futagawa, ed., *Frank Lloyd Wright Monograph 1942-1950*. Tokyo, 1988, p.1. See also, Terence Riley, ed., *Frank Lloyd Wright: Architect*. New York, 1994, p. 92.
57 Le Corbusier, *Le Corbusier: The Complete Architectural Works 1938-1946, Volume IV*. London, 1966, pp. 95, 97.

grandeur. Life in these pisé buildings can have great dignity and regain for man in the machine age a sense of the fundamental human and natural resources".[58]

This sympathetic response to earth structures reveals the contradiction which many figures of the Modern Movement felt between their ideological beliefs and their emotive response to natural materials and vernacular forms. Although these pioneers attempted to revive earth building, their efforts proved fruitless. Unlike Fathy, most of their investigations and projects did not go further than the drawing board. Although, Ruth Eaton believes that Fathy was "probably the most influential contemporary advocate of building in raw earth",[59] there is no doubt that if the pioneers of modern architecture realised buildings in mud, it would have attracted the attention of a much wider public and earth architecture would have found a new dimension in the modern era. Nevertheless, recognition of Fathy's contribution has not been translated into widespread adoption of his ideas. In his *Psychology of the House* Olivier Marc views the future for earth building in pessimistic terms.

> Hassan Fathy is the last man left on earth to insist on the impossibility of dissociating Adam from the clay which shaped him. If he is defeated, as I am sure he will be, his book will be the last victory of one who respected to the end the trinity of earth, man and habitat.[60]

Nevertheless, the 1970s witnessed a host of architectural movements and tendencies whose ideologies conformed to Fathy's thinking and ideas. The 1980s, which was the last decade of Fathy's life and career, also witnessed the emergence of the community architecture movement and public participation. Community architecture is one of the most significant trends which played a key role in contemporary architectural debate. It has emerged as a powerful force for change in the creation and management of human settlement as well as involving the active participation of people in the development of their own environment. Richards, who was among the pioneers of the community architecture movement in England in 1975,[61] argued that Fathy's concern with social needs and the problem of public participation in the design and building process, which

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58 Le Corbusier, *Le Corbusier: The Complete Architectural Works 1946-1952, Volume V.* London, 1966, pp. 26-27.
59 Eaton, *Architectural Review*, October 1981, p. 229.
60 Olivier Marc, *Psychology of the House*. London, 1977, p. 126.
61 Charles Knevitt, The Greening of Architecture. *Architectural Design*, v. 59, no. 5/6, 1989, p. 36.

he firmly grasped in the 1940s, "was one that hardly began to concern the architectural profession in the West until at least twenty years later". He believed that although this problem was implicit in the Modern Movement's insistence on the importance of research it only began to concern younger architects in the early 1960s, especially in Britain. Nevertheless, its "importance had been present from the first in Fathy's approach to his task of building for the villagers of Upper Egypt".[62]

Fathy believed that the standard of living and culture of the poor in the world could be developed by applying a new approach of mass co-operative housing. He argued that advanced modern technology has given us new materials and building methods as well as necessitating the imposition of the professional architect, who exploited technology in producing millions of identical houses. He explained that the expert professional architect has taken all the pleasure of building these houses away from the people, who are unable to follow the rapidly advancing techniques. Fathy believed that

> the result is hideous and inhuman... families are bundled into these ill-fitting cells without being able to say a word about the design, and however much science is applied to the grading of families and the matching of them to their dwellings, the majority are bound to be discontented.[63]

Fathy also realised that the poor cannot be housed cheaply even "when we do standardize, and we cannot house them with any semblance of human dignity unless we destandardize". Standardisation and mass production of housing are more expensive than the poor can afford. Fathy believed that without architect, contractor, planner and any governmental authority, the poor could build for themselves. "A man is an active creature, a source of action and initiative... Give him half a chance and a man will solve his part of the housing problem".[64] Fathy explained that when a man wants to build a house, all his family and neighbours help him to build it. However, co-operative house-building is a communal activity as well as a very persistent tradition. If the basic condition in the co-operative system is the voluntary donation of time and labour and the desire to receive similar help, then this system could be adapted by non-traditional societies as well as expanded and applied to a mass housing program. For Fathy, the

62 Richards, Serageldin and Rastorfer, 1985, p. 13.
63 Fathy, 1973, pp. 29-30.
64 Ibid., p. 32.

snag is that a house is basically a communal production where "one man cannot build one house, but a hundred men can easily build a hundred houses".[65] This approach involves social, economic, and cultural questions which are more substantial than the purely technical aspects that concern the architect. Fathy pointed out the crucial need to consider all these questions, for "each has a bearing on the others, and the total picture would be distorted by any omission".[66]

Fathy argued that a co-operative building system has enormous advantages over any other building systems which employ professional builders. He believed that "a village built by its own inhabitants will be a living organism, capable of growth and of continuing life, whereas a village built by hired professionals will be a dead thing that starts to fall to pieces the day after the builders leave".[67] Fathy argued that the future inhabitants of a settlement should be trained in building construction by working on their project as helpers; usually called in-service training. He employed this system in New Gourna village (1945-1948), which John Forwalter regarded as a role model for housing the third of the world's population in the poor countries. Forwalter believed that Fathy "is a wise and knowledgeable man. His approach could add much to the health, wealth and happiness of millions of persons who are presently the world's hard core of poverty and despair".[68]

Fathy explained that a prerequisite for the workability of the self-build system is to compartmentalise the village into neighbourhoods to "bring it to the human scale... this could allow for the creation of closer relationships and breed cooperation and concern within the group".[69] In the process of the New Bariz construction Fathy's intention was to apply the co-operative building system, which he tried in New Gourna twenty years earlier. He was influenced by the Bagawat, a fourth-century village and the contemporary village of New Gennah; both were cooperatively built neighbouring settlements in Kharga Oasis.[70] Fathy wanted to involve the future inhabitants of New

65 Ibid., p. 121.
66 Ibid., p. xv.
67 Ibid., p. 120.
68 John Forwalter, Searching for Significance. *The Hyde Park Herald*, 8 August 1973, p. 2.
69 Ms., FAAUC, no. 159, p. 15.
70 Ibid., pp. 7-8.

Bariz in the detailing of the design, so the buildings produced would be more satisfying for them.[71]

In their *Community Architecture*, Nick Wates and Charles Knevitt recognise that Fathy focused all his life on community architecture and that he is "best known for bringing architects, craftsmen and the community together in the creation of shelter for the poor".[72] They shared with Fathy the same belief that the environment works better if people contribute positively in the creation of places where they live, work and play, and are not treated as passive consumers. Like Fathy they believed that the only possibility to escape this disaster is

> to build housing that people want to live in; to give people a sense of pride and reinforce their identity with their local community; to build social facilities that are needed and properly looked after; to develop neighbourhoods and cities in ways that enrich people's lives by being genuinely responsive to their needs and aspirations.[73]

This attitude of creating better environments for community projects can be found in the work of Ralph Erskine (b. 1914) in his Byker Wall housing project (1969-1980) in Newcastle-on-Tyne (ill. 178). Erskine developed a social and cultural dialogue with the residents, similar to that of Fathy in the New Gourna (1945-1948) and the New Bariz (1967) villages.[74] Like Fathy's attitude towards the inhabitants of the New Gourna, Erskine was concerned about rehousing the inhabitants of the Byker Wall "without breaking family ties and other valued associations or pattern of life".[75] The Walter's Way project (1976) is another example of self-build housing projects. This project was designed by the British architect, Walter Segal (1907-1985) who, like Fathy, was concerned about cost control and methods of construction as well as achieving social needs.[76] Segal also applied the self-build method using timber frame construction, but unlike New Gourna, each family in the Walter's Way project was responsible for

71 Ibid., p. 21.
72 Nick Waites and Charles Knevitt, *Community Architecture: How People are Creating Their Own Environment*. London, 1987, p. 35.
73 Ibid., p. 17.
74 For detailed discussion of the cultural factor in Fathy's village-planning, see Chapter 6, pp. 168-173.
75 Mats Egelius, *Ralph Erskine, Architect*. Stockholm, 1990, p. 151.
76 Lampugnani, 1989, p. 302.

building their own house according to their own needs as well as at their own pace. The Walter's Way project won a *Times / RIBA* Award in 1987.[77]

Although other Western community projects were heralded in architectural publications, Fathy's early vision of establishing the basic formula of community-based development was hardly recognised. The Prince of Wales, an influential advocate of the community architecture movement, argues that the important issue nowadays is "how to give people more pride in their environment, involvement in their housing and more control over their lives... To restore hope we must have a vision and a source of inspiration".[78] He realised that these issues were implied in Fathy's philosophy and work especially his efforts for housing the poor and improving their living conditions. Prince Charles believed that "Fathy is a remarkable man whose courageous voice deserves to be heard".[79] Indeed, it is time to look objectively at the work of architects such as Fathy, who had an individual approach to community architecture as well as experiences that were sufficiently broad to deal with the difficulties involved. However, although Fathy's ideas towards a humanisation of architecture have become an important factor in the architectural debate, he can still be seen as the unacknowledged conscience of twentieth-century architecture.

From a late twentieth century standpoint, one can recognise that Fathy's architecture has contributed to many of the main themes running through the development of the century's architecture. Fathy remains a profoundly important figure, partly because of the way in which his work mirrors the complexity of those cultural, traditional and socio-economic changes that have taken place during the second half of twentieth century. Although Fathy remained an outspoken critic of modernism and criticised both the International Style and the pioneers of modern architecture in many of his writings, his main objective was to show that the architecture of the past is still a very rich source of inspiration to the coming generations, who should look to the inner content rather than the outer one. Because Fathy's career brought together many aspects of twentieth-century architecture, it is not easy to differentiate between his influence as an architect

77 Maureen Read, Community Architecture. *Architectural Design*, v. 59, no. 5/6, 1989, p. 45.
78 Community Enterprise. *Architectural Design*, v. 56, 7, 1986, p. 4.
79 Charles, Prince of Wales, 1989, p. 11.

and his contribution as a researcher and a teacher. But his legacy provided inspiration for younger architects whose prime concerns were to preserve cultural identity in architecture. Fathy recommended that architects should not just follow the canons of their art but must also "be humble, modest. Even discreet".[80] Fathy stated,

> It is hoped that before it is too late Near Eastern architects will come to realize the intrinsic value of their architectural heritage. In so doing, they will reap the rich rewards of the accumulated experience that was left to them by their ancestors and will produce successful and enduring works of art.[81]

80 Blumenfeld, *Architectural Association Quarterly*, v. 6, nos. 3-4, 1974, p. 57.
81 Fathy, Constancy, Transposition and Change in the Arab City, p. 333.

CHAPTER EIGHT

FOLLOWERS

Through his designs and his writings, Fathy influenced a younger generation of architects in Egypt and worldwide. His ideas and philosophy opened opportunities and became a source of inspiration for architects to recognise and appreciate their traditional architecture. The response to Fathy's approach from architects in the Developing World differed from that of Western architects. Between the 1940s and the 1960s, most of the Developing World's countries, especially Muslim nations, were obtaining their independence after a long period of colonisation. As a result of the uncertainties created by the introduction of modernism, architects began to search for national identity. When Fathy's architecture began to be widely known from the 1970s onward, these architects were influenced by his works, not only because of their links to the vernacular, but also because of their associations with Islamic architecture.

The common response of these architects to Fathy's architecture was that they regarded his buildings as prototypes for the contemporary Islamic architecture of the Middle East as his traditional forms and techniques epitomise their national and regional features. Fariborz Atapour argued that Fathy was vital in motivating architects to appreciate the God-given values of the past. Atapour also believed that Fathy showed Muslim architects how to preserve the monuments of their ancient civilisations, as well as "to fulfil that yearning for harmony and beauty" which represents the essence of their Islamic culture, and "which neither the conquerors of the East nor of the West have been able to destroy".[1] Like Atapour, Hassan-Uddin Khan argues that Fathy "is a reminder to us... that what is valuable is looking at our own places and at who we are... But we need to look at him with our eyes open".[2]

On the other hand, the response of Western architects to Fathy's architecture and ideas varied. While some architects admired the new possibilities of building domes and

1 Atapour, *Kayhan*, 7 October 1974, p. 4.
2 The Legacy of Hassan Fathy. *Aramco World*, v. 50, no. 4, July/August 1999, p. 57.

vaults with a primitive material such as mud, others were inspired by Fathy's philosophy and his humanistic approach. Mimi Lobell argues that Fathy's experiments in New Gourna "shows us by example what architecture should be for us all. We all have a right to expect the buildings we live in to respond to all aspects of our humanness, not just functional ones".[3] Like Lobell, Labelle Prussin of the University of Washington believes that the knowledge and experience gained from Fathy's experiment in New Gourna "provide new hope and new inspiration for those of us who tried, and the ideas which New Gourna generated will some day mature and flower".[4] However, the response of western and non-western architects to Fathy's approach centres around four main issues. These are: the use of traditional forms (dome, vault), materials and methods of construction; Fathy's approach to urban planning; the principles that guide Fathy's architecture and the formalist response to Fathy's works.

Traditional forms, materials and methods of construction

The major impact of Fathy's approach of employing traditional forms, materials and method of construction was to come, first, through the early work of El-Wakil, who was described by Prince Charles as one of Fathy's "most gifted students".[5] Throughout his life, El-Wakil remained dedicated to the course of vernacular architecture and traditional building techniques. Like his mentor, El-Wakil believed that "it is the role of art, and above all of architecture, to safeguard the environment in which the tradition can survive".[6] El-Wakil's Halawa house (1972-1975) in Al-Agamy, near Alexandria, exhibited the architect's awareness of the traditional building forms such as dome, vault, loggia, *mālqāf* and *māshrābīyyāhs* as well as the traditional building techniques (ill. 179). El-Wakil also employed Fathy's team of craftsmen including the master-mason, Aladdin Mustafa, who executed most of Fathy's work. Like Fathy, El-Wakil recognised the importance of the craftsmen in the process of the construction and acknowledged his collaboration with master mason Mustafa. El-Wakil argued that architecture is a collective art which has its own vocabulary and that his work with Mustafa was an opportunity to learn this language. "The poverty of modern architecture

3 Mimi Lobell, review of *Architecture for the Poor* by Hassan Fathy, 1973. *East West*, June 1976, p. 53.
4 Labelle Prussin, review of *Architecture for the Poor* by Hassan Fathy. *Journal of the Society of Architectural Historians*, v.37, no. 1, March 1978, pp. 55.
5 Charles, Prince of Wales, 1989, p. 11.
6 Lucien Steil, Tradition & Architecture. *Architectural Design*, v. 57, no. 5 / 6, 1987, p. 53.

is in large part due to the fact that architects believe they can do all the detailing without a sound knowledge of techniques and materials".[7] For El-Wakil, the Halawa house was "a long awaited opportunity to realise the study and research [he] was undertaking in vernacular architecture". In 1980, El-Wakil's Halawa house received the Aga Khan Award for Architecture.[8]

Like Fathy, El-Wakil's traditional approach has also begun to flourish in mosque architecture, but he was more successful than Fathy and built more than eleven mosques in Saudi Arabia. Of note, the Corniche mosque, Jeddah, built in 1986, demonstrates the extent of Fathy's influence on El-Wakil (ill. 180). Although built in Saudi Arabia, El-Wakil combined elements of Islamic architecture and the Egyptian vernacular. The Corniche mosque featured traditional forms such as the squinched-dome and the vault. El-Wakil also used local materials as well as employing the traditional method of construction which he learnt from Fathy. Although the Corniche mosque is a small-scale building, the way its elements are tied together and the form of its minaret take "the concept of the minimal mosque to the absolute limit". Chris Abel believes that the mosque externally and internally "possesses a three-dimensional quality and authority that belies its minute size".[9]

Although, El-Wakil was inspired by the evocative silhouette of the ancient Geyoushi mosque (1085), built on the Muqataam hill, Cairo, the design-concept of the Corniche mosque is also reminiscent of Fathy's Said house. Both buildings have a high-vaulted loggia used as an entrance and a domed hall. The Corniche mosque was awarded the Aga Khan Award for Architecture in 1986. The jury citation stated that El-Wakil

> should be cited as a proponent for innovative sitting, for rethinking classical methods of building, and for the effort to compose formal elements in ways that bespeak the present and at the same time reflect the luminous past of Islamic societies.[10]

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7 Kultermann, 1999, pp. 29-30. Aladdin Mustafa executed most of Fathy's projects and for whom Fathy built a house in 1981, and the carpenter, Hassan El-Naggar, who executed the wooden work of Fathy's Alpha Bianca house, Spain in 1979.

8 Holod and Rastorfer, 1983, pp. 58, 113-117.

9 Chris Abel, Work of El-Wakil. *The Architectural Review*, November 1986, p. 55.

10 Serageldin and Steele, 1996, p. 51.

Steps towards an Egyptian architectural vernacular also become evident in the works of Ahmed Hamid, who worked with Fathy between 1979-1983. Working at a small-scale, Hamid's skill in abstract patterns of detail and craftsmanship recalled El-Wakil's approach. In his design for Al-Touni country house in Fayum in 1990, Hamid employed domes, vaults and wooden-work windows as well as the wooden pergola, which was a distinctive element in the work of both Fathy and El-Wakil (ill. 181). Like Fathy, Hamid used local materials and methods of construction.[11] Unlike Fathy, Hamid combined elements from the Islamic tradition and the Far Eastern tradition such as the horse-shoe arch. Although the exterior of the Al-Touni house looks traditional in character and demonstrated a sense of ancient images of community, Nawal Hassan believes that this combination of diverse styles does not conform to the character of the Egyptian countryside.[12]

Another important figure in Fathy's circle is Omar El-Farouk, who studied with him for more than 15 years and was involved in many thorough traditional projects.[13] Like his mentor, El-Farouk was "trying to use traditional architecture to correspond with climatic conditions of the area and social habits of the people".[14] El-Farouk achieved buildings which, like Fathy's work, seemed descendants of Islamic antiquity. Unlike El-Wakil, El-Farouk has also been involved in the traditional interior design of many private apartments and public buildings. He believes that interior design is inseparable from structural design. In this, El-Farouk could be regarded as the only disciple who approached Fathy's traditional approach from another angle by undertaking the task of reviving Islamic interior decoration.[15]

Although Fathy's approach of using traditional materials and building techniques did not attract Egyptian architects, it has been widely accepted and used in many countries in Africa, including Zimbabwe, Mali, Mauritania, and South Africa. In Zimbabwe, Michael Noyce of Ove Arup and Partners was deeply influenced by Fathy's traditional approach. Noyce built with mud brick and employed the traditional building techniques

11 Abdullah Schleifer, Ahmed Hamid: New Directions in Islamic Architecture. *Arts & The Islamic World*, no. 21, Spring 1992, pp. 19-24.
12 Author's interview with Nawal Hassan, 2000.
13 Schleifer, *Arts & The Islamic World*, v. 2, no. 2, Summer 1984, p. 44.
14 Mary A. Kelly, Reviving Tradition. *Egypt Today*, v. 17, no. 9, September 1996, p. 103.
15 Schleifer, *Arts & The Islamic World*, v. 2, no. 2, Summer 1984, p. 44.

of constructing vaults and domes in many projects.[16] Like Noyce, André Ravereau has studied the traditional architecture of Mali and committed himself to explore the deeper structure of local architectural language in order to achieve "universality at the core".[17] Ravereau's Mopti Medical Centre (1976) was built with the available local materials and building techniques (ill. 182). It is also characterised by a high level of thermal and lighting efficiency without using sophisticated modern systems. The Mopti Medical Centre "performs its main functions, enhancing the community of buildings in which it stands through the use of related materials and forms".[18] Curtis believes that Ravereau "is one of those regionalists to have caught the spirit and not just the letter of the Fathy point of view".[19]

In Mauritania, Joseph Esteve, employed Fathy's architectural vocabulary in his low cost housing (1977). Esteve arranged the rectangular spaces around public and private courtyards and covered them with shallow domes. The same concept was applied in Philippe Glauser's IPD (Institut Pan-African pour le Development) University and the Aga Khan Award-winning Kaedi Hospital (1989), designed by Fabrizio Carola,[20] of the Association for the Development of Traditional African Urbanism and Architecture (ADAUA), a firm which embraced and applied Fathy's ideas (ill. 183). The jury of the Aga Khan Award believes that the effect of the Kaedi Hospital architecture "is memorable, far removed from the projects that imitate the vaulted and domed structures made famous by the late Hassan Fathy. This is not a copy. This is an outstanding original, a lasting contribution to the art of building with brick structures".[21] ADAUA also embraced Fathy's self-help building system and believed in its applicability to meet the needs of the poor. They employed this approach in a local self-help project (c.1983) in Mauritania in order to create a sense of participation among the community. Like Fathy the main objective of ADAUA was to provide dwellings for the poor by giving

16 Michael Noyce, Zimbabwe: Appropriate Technology. *RIBA*, July 1981, pp. 29-31.
17 Curtis, *Mimar*, no. 19, January / March 1986, p. 27.
18 Holod and Rastorfer, 1983, p. 86.
19 Curtis, *Mimar*, no. 19, January / March 1986, p. 27.
20 Dan Cruickshank, ed., *Sir Banister Fletcher's A History of Architecture*. London, 1996, p. 1478.
21 Kaedi Regional Hospital [The Aga Khan Award for Architecture]. *The Architectural Review*, v. 198, no. 1185, November 1995, p. 68.

on-site technical advice, as well as establishing small industries that produce the required building materials.[22]

A second generation of followers, who never worked with Fathy, followed the same path of establishing an architectural identity. In Johannesburg, South Africa, Muhammad Mayet, a former student of El-Wakil, built the Jumah Mosque (c. 1990s), in order to re-establish the spiritual identity of the Muslim community. Like Fathy and El-Wakil, Mayet articulated his mosque by using traditional forms such as domes, vaults, pendentives and squinches as well as constructing the walls of load-bearing brick. Catherine Slessor of *The Architectural Review* believes that the detailing of all spaces and ornamentation enhanced a sense of history and created "an appropriate ambience for meditation and prayer in the heart of the city".[23]

Fathy's influence was felt not only in the Near East, but also in the Western world. In Europe and the United States some architects did their best to use Fathy's traditional framework as their reference point. The argument they put across was that the health of a region lay in the interaction of people with their place and an appropriate balance between town and countryside. The Development Workshop, Canada, is a group of architects whose main concern was to help solve the problems of the poor as well as to explore the functional beauty of the vernacular. They believe that Fathy's approach and vision helped them to marry their architecture with these concerns.[24] They collaborated with Fathy in conducting environmental research on many houses in the cities of Sohar, Muscat and Sallala in Oman in 1973.[25] The group formulated a comprehensive vernacular approach and their work with Fathy in Oman "demonstrated how their vernacular 'indigenous building' approach related to broader development theory and practice".[26] As a tribute to Fathy, the group stated that "he, more than any one, teaches

22 Theo David, Mauritania: A New Community Composed of Indigenous Domed, Vaulted Forms. *Architecture: The AIA Journal,* August 1983, p. 110.

23 Catherine Slessor, Sacred Room. *The Architectural Review,* March 1995, pp. 68-69.

24 Richards, Serageldin and Rastorfer, 1985, p. 158.

25 Fathy, Research in Climate and Architecture for Development Project in Oman, Submitted to the Director of Planning, Sultanate of Oman, 8 July 1973, pp. 1-6. Ms., FAAUC, no. 205.

26 Paul Oliver, ed., *Encyclopedia of Vernacular Architecture of the World,* 3 volumes. New York, 1997, p. 25.

us from both his successes and failures, what it is we must know to serve architecture in development".[27]

In England, David Sims, an urban planner, and Olivier Sednaoui, an architect, were influenced by Fathy's traditional approach and were, specifically, impressed by his New Gourna village. During their three-year's stay in Egypt, they built a pilot project house (1978-1980) in Luxor (ill. 184). They built domes, vaults and walls using mud-brick and traditional building techniques. Like Fathy, Sednaoui believed that when peasants saw foreigner-trained architects build in mud, their faith in their indigenous materials would revive and they would "realize that they are *à la mode*".[28] He also hoped that young architects would build in mud which creates "a sublime piece of art at low cost... The challenge is unique".[29]

Unlike England, the attitude towards Fathy's earth architecture was more heightened in France where there are two centres inspired by Fathy's approach of using traditional building materials and techniques. Both institutions employ the owner-builder system in West Africa and the Middle East. These are the Development Workshop of Lauzerte, which has helped to introduce the Nubian technique of mud-brick dome and vault construction among villagers in Mali, Niger and Iran and the Centre de Recherche et d'Application: Terre (CRATerre).[30] In 1981 the CRATerre undertook an experimental village in earth at L'Isle d'Abeau, between Lyon and Grenoble.[31] Orientated towards Third World needs, the village formed part of the Earth Architecture Exhibition, 'Le Genie de la Terre' at the Georges Pompidou Centre in France in 1981. The village was also intended to incorporate an open air museum where examples of earthen architecture and prototypes of unbaked earth houses were displayed, including designs by Francois Cointeraux, Le Corbusier, Wright, Schindler and Fathy.[32]

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27 Richards, Serageldin and Rastorfer,1985, p. 158.
28 Neil MacFarquhar, Mud Brick. *Arts & The Islamic World*, v. 2, no. 2, Summer 1984, p. 46.
29 Ibid., p. 49.
30 Swan, *Aramco World*, v. 50, no. 4, July / August 1999, p. 26.
31 Eaton, *Architectural Review*, October 1981, p. 230.
32 Martin Meade and Jean-Caude Garcias, Return to Earth. *Architectural Review*, v. clxxviii, no. 1064, October 1985, p. 66. For detailed discussion of the earth houses of Wright, Le Corbusier and Schindler, see Chapter 7, pp. 199, 200.

Ironically, one of the most energetic advocates of Fathy's approach has been the American, Simone Swan, a self-taught architect and a lifelong student of the arts. Swan admired Fathy's architecture and spent three years in Cairo as a student and an assistant for him.[33] In the United States, Swan has spent the past decade among architects, engineers and conservationists, attempting to continue Fathy's work in the desert climates of the Americas. Since 1994, Swan's dedication to carry on Fathy's work has led her to establish the Swan Group in many cities including Presidio in Texas.[34] Swan built houses and structures using mud-bricks and traditional building techniques (ill. 185). She says if Fathy were still alive "I'd ask him first... do you find this architecture that I have built to be truly harmonious with the culture, with the environment and the climate?... I hope he would agree".[35]

Planning approach

If Fathy's traditional forms, materials and building techniques found a wide acceptance from followers, his planning approach was less successful. This can be attributed to a number of reasons including, the lack of opportunities for village and town projects, the economic constraints, or the architects' wish to follow modern planning concepts. Some villages have been realised by Fathy's followers, but few of them complied with the principles that governed Fathy's approach. One of the few who have been involved in village planning is the Jordanian architect Rasem Badran (b.1945). Badran studied architecture in Germany and opened his own architectural office in Amman, Jordan in the early 1970s.[36] He is of the same generation as El-Wakil, but he did not work directly with Fathy. Badran was searching intuitively for what he termed "the social, historical, economic and cultural aspects" of the Muslim world.[37] Like Fathy, the core of Badran's architecture is to incorporate the design concept of the Arab village into his work. Badran's concept of creating contemporary Arab housing in harmony with the old Islamic tradition is clearly evident in his Abo Ghueillah Housing project (1979) in Amman (ill. 186). Like Fathy's planning concept in New Gourna, Badran clustered the

33 Dick Doughty, From the Nile to the Rio Grande. *Aramco World*, v. 50, no. 4, July / August 1999, p. 50.
34 Ibid., p. 26.
35 Ibid., p. 52.
36 Udo Kultermann, , Contemporary Arab Architects and their Contribution to the Renaissance of Architecture in the Arab States. *Ekistics*, v. 47, no. 280, January / February 1980, p. 43.
37 J. Steele, Hassan Fathy: The New Traditionalists. *Architectural Design*, v. 59, no. 11/12, 1989, p. vii.

houses of the Abo Ghueillah project and combined them into a comprehensive unit. He also used interconnecting streets and buildings as well as open and enclosed spaces. The idea of the neighbourhood as the nucleus of the old Arab city was expressed in an independent form. While each individual unit has its own identity, it contributes to the whole. Badran's planning concept touches on the very essence of Islamic culture.[38]

El-Farouk also had opportunities to plan villages, but all of them have been tourist projects. His villages featured a fusion between modern and traditional architecture in a synthesis of an almost natural character. In the early 1990s, El-Farouk built the Felfela Tourist Complex in Hurghada on the Red Sea, Egypt (ill. 187). The complex consists of a tourist village situated near the beach and a residential area located on the opposite side of the Corniche. The tourist village is built on steps of different levels, but each level is staggered to allow views of the sea. The planning included pedestrian streets opening onto courtyard-like spaces, which are oriented towards the sea breeze. The spaces of the units are covered with variations of domes or vaults and have terraces facing the sea. Like Fathy's Journalists' Tourist Village (1989), the residential area consists of 35 villas, a mosque, recreational area, swimming pool, a Turkish bath and a market.[39] The planning approach of the village is clear evidence of the strong influence of Fathy's ideas upon El-Farouk who, beyond his evocation of Islamic architecture, has also incorporated features of the Egyptian vernacular.

Unlike El-Farouk and Badran, El-Wakil was less successful in dealing with urban issues. Mohammad Al-Asad explains that El-Wakil's buildings exhibit expressive sculptural qualities and look impressive when they are freestanding "within a setting defined by the uniform backdrops of sand, sea, and sky", for example the Corniche and the Ruwais mosques. But when the same buildings are placed within contemporary urban settings, they are less successful and appear fragile. Al-Asad explains that the intricate details of *muqarnas* (honeycomb vaulting), crenellations and decorated surfaces are undermined when juxtaposed with the concrete surfaces of neighbouring buildings. Although, El-Wakil has thoroughly examined past Islamic structures, he did not give the same consideration to the relationship between these structures and their

38 Udo Kultermann, Contemporary Architecture in Jordan. *Mimar*, no. 39, June 1991, p. 14.
39 J. Steele, The New Traditionalists. *Mimar*, v. 11, no. 40, September 1991, pp. 44-47.

urban surroundings.[40] Unlike Fathy, El-Wakil did not pay enough attention to the manner in which the buildings of medieval Cairo were adapted to the surrounding networks of narrow and winding streets. Al-Asad believes that this "sensitivity to the constraints of surrounding urban fabric is lacking in El-Wakil's work".[41]

One of the rare opportunities of village planning which has an affinity with New Gourna is Hager Al-Dabiya village (c.1990), south Luxor, a few kilometres from New Gourna village (ill. 188). The government commissioned Ahmed Abdou, a friend of Fathy and formerly Head of the Architectural Department, School of Fine Arts, Cairo, to build the village in order to house the homeless from a flood disaster. The external appearance of Abdou's village indicates a desire to follow Fathy's design approach, but the style of the actual planning recalled the grid-iron system of modern architecture rather than the narrow winding streets, squares and meeting places of the villages of Upper Egypt. Similar to Doxiadis's Santorini village, the units are constructed of concrete, fired-brick and stone as well as covered with variations of domes and vaults. Although the planning of the village is in the spirit of Fathy's New Gourna, the gap between Fathy's planning vision and that of Abdou was the result of a lack of a sociological understanding of the interaction of place and people. Although Abdou expressed admiration for Fathy's ideals, he either did not fully share his belief that the roots of one's culture, including the heritage of the built environment, were the vital means of achieving the potential for individual growth, or he was under pressure from the government that he could not resist, to use modern planning and construction methods in order to complete the village in a short time. Whatever the reason, if Abdou considered Fathy's ideas on social reconstruction in New Gourna and New Bariz villages, they would had been of great importance to help him sustain and build up the image of the village plan.[42]

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40 Mohammad Al-Asad, The Mosques of Abdel Wahed El-Wakil. *Mimar*, v. 12, no. 42, March 1992, pp. 35-36.

41 Ibid., p. 36.

42 In an interview with the author in 2000, residents of the Hager Al-Dabiya villge expressed their dissatisfaction with the planning pattern of the village as well as the lack of the natural ventilation in their units.

Principles (modernity and tradition)

The problem for the majority of Fathy's followers was his insistence on his own particular theory of knowledge. They found Fathy's mode of thought a challenging barrier. Although many architects reacted positively to Fathy's buildings and planning approach, the most common response of the majority of his followers was to his philosophy and ideals. They were capable of extending his principles, and using them to develop their own. The sensitive relationship of new and old buildings has been a matter of great importance to Fathy's followers. Their main intention was to create architecture by integrating local tradition and modern technology. However, they took pride in the purity of their intuitive methods of design and achieved buildings which descended from their regional architecture.

Of all Fathy's disciples, Abd El-Rahman Sultan (1947), who completed his masters and doctorate degrees in Japan and is now a member of the Architectural Institute of Japan, has chosen to follow an independent path. Although, Sultan was shaped by Fathy since he was 17 years old, he did not "advocate traditionalism and reversion back to archaic architecture... but rather to understand, and whenever possible, borrow from the past guidelines for the contemporary".[43] Like his mentor, Sultan is also developing his theories for publication, although his book *Traditional Architectural Forms in Relation to the Cosmos*, has yet to appear.[44]

Like Sultan, Mohamed Al-Husseiny, who was not trained in Fathy's workshop, was influenced by and followed Fathy's principles. Al-Husseiny has been preoccupied with issues of identity, scale and meaning which required a reconsideration of modern architectural principles in the light of regional traditions. In his Bitter Lakes villa (1989) in Egypt (ill. 189), Al-Husseiny blended his building into the surrounding landscape, attempted to derive new models appropriate to the economy of today and showed a critical approach towards current extremes. Al-Husseiny built with modern materials as well as covering the openings with panels of latticed woodwork instead of the

43 Ahmed Sultan, Notes on the Divine Proportions in Islamic Architecture. *Process Architecture*, no. 15, May 1980, p. 132.

44 Kultermann, *Mimar*, no. 4, April / June 1982, p. 60. Extensive bibliographical research has failed to find any trace of this book to date.

traditional *masharabiya*, which is so expensive to make nowadays.[45] Khaled Asfour argues that Al-Husseiny represents a successful example of that "modern Arab architect" whom Fathy would have liked to see experimenting with new solutions.[46] Fathy's dream was to see the Arab architect "renew Arab architecture... by applying modern techniques modified by the valid ones of the past... and then by working to find new solutions for these new elements".[47] Asfour believes that the ideology which Al-Husseiny employs in his work established "a dialogue with Hassan Fathy that finally surpassed the level of imagery".[48]

One Egyptian architect whose work from the 1960s onwards has stood out in clear contrast with much modern architecture has been Abdelbaki Ibrahim. Ibrahim was a friend of Fathy and a strong advocate of his philosophy and ideals more than his work. In 1980, Ibrahim founded the Centre of Planning and Architectural Studies in Cairo. The Centre has done extensive work in the fields of residential and commercial buildings in Egypt as well as in many parts of the Arab world. Through his centre, Ibrahim published several books discussing the historical perspective of Islamic architecture and planning, as well as a biography of Fathy in 1987.[49] One of the most important objectives of the centre has been the attempt to raise pride in cultural heritage as well as to find solutions to the contemporary problems of Egyptian architecture through a modern, scientific approach. His numerous houses and projects demonstrate how architecture might achieve a refined synthesis of modern and traditional forms and techniques (ill. 190).

Not surprisingly, El-Wakil, who embarked on using pure Egyptian traditional vocabularies, began to integrate tradition and modernity in both a revivalist and an eclectic manner. Unlike Fathy, El-Wakil borrowed his vocabulary from a wide range of traditions, including those of the Mamluk in Egypt, the Saljug in Iran, the Ottoman in Turkey and the Rasulid in Yemen. In his buildings, El-Wakil skilfully combined elements of these diverse historical vocabularies into "a disciplined, aesthetically

45 Khaled Asfour, Bitter Lakes Villa, Egypt: A Dialogue with Hassan Fathy. *Mimar*, no. 39, June 1991, p. 58.
46 Ibid., p. 54.
47 Fathy, 1972, p. 15.
48 Asfour, *Mimar*, June 1991, p. 54.
49 Abdelbaki Ibrahim, *The Arab Architects: Hassan Fathy*. Cairo, 1987.

unified, and harmonious whole".[50] Al-Asad argues that El-Wakil's buildings have "contributed to establishing a dialogue in the Islamic world with its architectural heritage, and... brought images of that heritage to our consciousness".[51] Diane Ghirardo also believes that El-Wakil's way of deploying indigenous Islamic forms on a palatial scale "liberated local Islamic building traditions from their associations with poverty and the lower classes, a strategy not so different from that of Andrea Palladio with vernacular architecture for his designs of villas in the Veneto".[52]

Although, El-Wakil's works have been widely acknowledged, his approach has been surrounded by controversy and subjected to criticism. Abdullah Y. Bokhari believes that El-Wakil's eclectic manner represents "an extreme and blind adherence to traditional forms, a revivalism with little or no consideration of the concepts of fitness and propriety".[53] Curtis considers that the philosophy behind the Islamic structures has "slipped away" from El-Wakil's buildings, "leaving a suave repertoire of neo-Fatimid devices (domes, arches, squinches etc)", which were introduced to the rich Arab countries "as a sort of instant Islamic identity kit".[54]

Unlike Curtis, Leon Krier interpreted El-Wakil's work from another perspective. "Beyond the discipline of Islamic building and construction types, [El-Wakil's] formal repertoire is equally informed by the study of classical orders and mouldings and by the geometric science of Western and Eastern cultures". Krier also argues that El-Wakil's buildings are not a beautiful collage of different elements, "but organic spatial and volumetric compositions which, while being definitely Islamic in character, reflect the universal nature of that culture".[55] Like Krier, Abel believes that "El-Wakil's architecture... possesses an expressive sculptural quality which is lacking in the historical models drawn from Cairo and also in Fathy's more reticent architecture".[56] It is therefore insufficient to see El-Wakil as a mere follower of his mentor Fathy. El-Wakil turned to Fathy, not to mimic his style, but to draw on his evolving qualities of

50 Al-Asad, *Mimar*, v. 12, no. 42, March 1992, p. 34.
51 Ibid., p. 35.
52 Diane Ghirardo, *Architecture After Modernism*. London, 1996, p. 141.
53 Datsun Complex, Jeddah [El-Wakil's work]. *Mimar*, no. 1, July / September 1981, p. 57.
54 Curtis, Roots and the Aga. *The Architectural Review*, March 1987, p. 88.
55 Steele, *Mimar*, v. 11, no. 40, September 1991, p. 41.
56 Abel, *The Architectural Review*, November 1986, pp. 53-55.

subtle spatial complexity and to transform both his principles in the service of new intentions and to translate traditional forms into ones acceptable to the twentieth century.

Fathy's writings and philosophy were also a source of inspiration for a number of architects in the Arab world. Kultermann believes that Fathy's *Architecture for the Poor* "has become a moral basis for the coordinated activities of Arab architects in all Arab states and thus has eminently contributed to the first phase of a Renaissance of Arab architecture today".[57] Rifat Chadirji (1926) from Iraq, studied architecture in England and established his practice in Baghdad. Like Fathy he was aware of the traditional settlement patterns of the Arab city in Iraq and employed them to serve contemporary needs. Unlike Fathy, Chadirji devoted his professional life to reconciling the culture and traditions of his country with the realities of growing modern technology. Chadirji believes that Fathy's experiments with traditional building methods are "either naïve or simplistic attempts" to deal with the very complex problems of the future of architecture. He, nevertheless, acknowledges that these experiments could be of some value to the development of regional architecture, although their aesthetic values are at odds with present-day stylistic fashions.[58]

Chadirji's Tobacco Monopoly Building (1966) in Baghdad is clear evidence of a contemporary Arab architecture (ill. 191).[59] It exhibited a synthesis of international avant-garde concepts and abstract forms derived from his own traditions. For example, Chadirji employed simple projecting *māshrābīyyāhs* made of brick or concrete instead of the expensive wooden ones. He also shaped the walls in cylindrical forms, which are reminiscent of old palaces and fortresses of Iraq. However, Chadirji's architecture excluded simplistic imitations of traditional features and primitive technologies "because neither is compatible with the fundamental thrust of the mechanical-aesthetic mode".[60] In his forward to Chadirji's book, Venturi suggests that the architectural analysis of Chadirji "appears applicable in many ways to the rest of the world - to the

57 Udo Kultermann, Contemporary Arab Architecture. *Mimar*, no. 3, January / March 1982, p. 77.
58 Rifat Chadirji, *Concepts and Influences: Towards a Regionalized International Architecture*. London, 1986, p. 44.
59 Ibid., p. 118-119.
60 Ibid., p. 49.

so-called Western world which is mine, as well as to the so-called developing world which is his".[61]

Like Chadirji, Badran did not perceive history as a source of physical forms to be reinterpreted, but tried to adapt the process behind these forms and explore the social forces behind traditional typologies. Steele recognised that Badran's perception of typology is closer to that of Aldo Rossi than to that of Fathy.[62] In his *Architecture of the City* Rossi argued that typology is an element which plays an essential role in constituting form, but one should "discern the modalities within which it operates and, moreover, its effective value".[63] Therefore, typology must be determined by the principles that generated them and should not be exactly copied. Bilal Hammad, Badran's colleague, believes that Badran "is one of the best of the new generation of architects in the Arab world and should be put on the same standing as Rifat Chadirji".[64] Unlike Fathy, Badran intended to develop an innovative approach, similar to that of Chadirji, to evoke local culture without copying past traditional forms. Charlotte Ellis argues that, although Badran's work is based on contemporary design within a traditional framework, he avoided creating an individualistic style.[65] Compared with El-Wakil's highly sculptural mosque projects, Badran's Qasr Al-Hakim complex (1985-1992) exhibited a strong relationship between the traditional elements of the Arab city and their context (ill. 192).[66]

The Indian architect, Charles Correa, whose "admiration for Hassan Fathy in no way blinds him to the dangers of reviving the past or of clinging to tradition,"[67] argued that "the old architecture - especially the vernacular - has much to teach us as it always develops a typology of fundamental common sense".[68] Unlike Fathy, Correa was not steeped in history, but he broke with it. Like Fathy's work, the sense of antiquity is present in Correa's buildings, but this was achieved by modern means, in which space, structure, materials and light were endowed with a resonant abstraction. Correa's

61 Ibid., p. 1.
62 Steele, *Mimar*, v. 11, no. 40, September 1991, p. 42.
63 Aldo Rossi, *The Architecture of the City*. New York, 1982, p. 41.
64 Kultermann, *Mimar*, no. 39, June 1991, p. 13.
65 Charlotte Ellis, The Architectural Review in the Gulf. *The Architectural Review*, May 1998, p. 18.
66 Steele, *Architectural Design*, no. 11/12 1989, p. vii.
67 Hassan-Uddin Khan, *Charles Correa: Architect in India*. Singapore, 1987, p. 16.
68 Ibid., p. 172.

Gandhi Ashram Memorial Museum in Ahmadabad (1958-1963) exhibited a combination of both foreign and native sources of influence and inspiration. Correa's intention was to evoke Gandhi's ideals of simplicity and authenticity.[69]

The copiers of forms

Of course, Fathy's buildings and ideas over fifty years, not only influenced a generation of architects, but also did something to change taste and this had an impact on patrons of architecture. Fathy's familiar devices (domes, vaults, etc.), which were not so inspiring until the 1980s, began to be felt in major projects in Egypt and the Arab world from the late 1980s onward. They became of great interest to those who are trying to find the best form appropriate to their region, irrespective of their understanding of the principles that generated them. Felicia Clark has questioned, whether "this is the result of a vogue for indigenous styling or springs from an in-depth appreciation of Fathy's convictions".[70]

In 1986 Adli Mestekawy, an investor who admired Fathy's traditional approach, built the Sanafir Hotel in Na'ama Bay, Sharm El-Sheikh on the Red Sea (ill. 193). Mestekawy believed that the Sanafir Hotel proved that business could work hand-in-hand with environmental awareness as well as a global perspective.[71] Like Fathy's buildings, the solution of the Sanafir hotel is simple, unpretentious and featured Egypt's vernacular and Islamic style with lots of modern touches. Domes or vaults cover the hotel's units and some parts of the roofs are used for sitting, a feature that is similar to that found in traditional peasant's dwellings.[72] Fathy's tourist work such as his Journalists' Association Resort Village (1989) encouraged many other developers, investors and architects to have confidence and employ his traditional forms. In the early 1990s, architects such as Rami Al-Dahan, Sohir Farid and Ahmed Hamdy made a fresh interpretation of Egypt's vernacular.[73] A striking example of their work is the Al-Gouna Village in Hurghada on the Red Sea. It is a resort complex consisting of a number of hotels which are grouped organically around courtyards and artificial lakes.

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69 Charles Correa, *Charles Correa*. Singapore, 1984, p. 16.
70 Clark, *Architectural Record*, v. 168, January 1980, p. 195.
71 Susanne Chabara, Talk of the Town. *Egypt Today*, v. 15, no. 2, February 1994, p. 81.
72 Author's visit to the Sanafir hotel, 2000.
73 According to Dr Sayed Ettouney, Rami Al-Dahan, Sohir Farid and Ahmed Hamdy claim that they are disciples of Hassan Fathy. Author's interview with Dr Sayed Ettouney, 2000.

Like the Journalists' village, Al-Gouna village featured, domes, vaults, claustra-wooden-work and narrow pedestrian streets and public spaces.[74]

Although the Egyptian architects succeeded in satisfying the requirements of Samih Sawiris, the owner of Al-Gouna village, he decided to invite a western architect to build another hotel within the complex. Sawiris admired the work of the renowned American architect Michael Graves (b.1934), especially his uncompromising post-modern approach and extensive experience in hotel architecture. Sawiris regarded Graves "as an architect who would not sell out design ideas for the sake of hotel functionality".[75] Graves was commissioned to build the 282-room Miramar Hotel which is managed by ITT Sheraton (ill. 194). Graves admired the traditional-style of the hotels of the Al-Gouna village, but Sawiris wanted him to produce a "new hotel in a modernised version of this style, as if the work of Hassan Fathy was being reinterpreted two generations [later]".[76] However, although Graves employed Fathy's traditional style as the main concept of his design he also incorporated his own post-modern touches. "While I have always been interested in the work of Fathy, [Sawiris] did not want a strictly traditional building... The more abstract elements that I prefer to employ could play a significant role as well".[77]

Graves's hotel represents an example of the neo-vernacular and illustrates his interest in 'figurative architecture'. The hotel is made up of clusters of villas situated on islands which are connected by wooden bridges (ill. 195). Abstract elements such as domes, vaults, balcony palisades, terrace handrails and wooden lattice-work are used in many different functions around the units (ill. 196). Variations of dome shapes include the hemisphere, a bell-shape and the doughnut-shape with opening covered by a projecting cylinder above. There is also a pedestrian arcade that runs the whole length of the main entrance-road of the village, which is reminiscent of that of the *khān* in New Gourna village (ill. 197). Unlike Fathy, who always preferred to give his buildings the natural

74 Kafr Al-Gouna: the Red Sea, Egypt. *Alam Albena*, no. 206, December 1998, pp. 17-25. (in Arabic).
75 Eleanor Curtis, A Star is Born. *Egypt Today*, v. 18, no. 9, September 1997, p. 78.
76 Ibid., p. 79.
77 Ibid., p. 80.

colour of its materials, Graves gave the village dynamism with his usual use of vivid colours including blue, red, brown and dusted-brown.[78]

The concept of Graves's post-modern architecture contradicted Fathy's traditional views of design, which relied upon the use of past forms and styles in an attempt to achieve excellence. Although the fluency of Graves's abstract language reveals his remarkable ability in merging post-modern ideals with thoughts of peasant art and architecture developed by Fathy, he copied the surface effects of Fathy's style without much grasp of its generating principles or cultural symbols. For example, Graves did not adhere to the design principles of the *qā'āh* in planning the guest-units. The units also lacked the natural ventilation system which should have combined a *mālqāf* and openings in the dome to let the hot air out but were provided with air-condition units instead. The disadvantage of Graves's approach is that he did not reproduce the core qualities behind his forms which, although fascinating to the eye, could be seen as a tired pastiche.

Undoubtedly, Fathy provided some of the essential bridges between the architectural culture of the past and that of the late twentieth century. This is evident in the work of his advocates who rejected the fragmentation and brutality of the modern world and made great efforts to reintegrate art and utility in an attempt to stem the alienating effects of capitalist development. The work of Fathy's followers, which continued to explore his main themes, is an indication of their tireless efforts to establish an appropriate link between the past and the present. Their "search for a meaningful expression of the continuity between contemporaneity and tradition, seems to assure that such a link will finally be established".[79] Steele argues that the continuity of the work of Fathy's followers "will ensure that his ideas will not be lost, but will continue to grow and transform the built environment throughout the Middle East".[80] Like Steele, Kultermann believes that there is hope that the works of Fathy's followers will become models for future generations of Arab architects as well as establishing the first steps

78 Author's visit to Kafr Al-Gouna village, 2000.
79 Steele, *Mimar*, v. 11, no. 40, September 1991, p. 47.
80 Steele, *Architectural Design*, no. 11/12 1989, p. vii.

toward an emerging, self-contained Arab architecture.[81] In fact, the work of Fathy's followers has indicated that an individual was neither capable of discovering new forms nor of simply imitating past styles, but that the creation of new forms is the result of a continuum of multi-generational collective work. For Fathy's followers, the essence of architecture was not to reveal genius, but rather to achieve knowledge and mastery of craft and construction. By refusing formal innovation, they were led to propose an array of elements that were tested by their countries' culture. Perhaps this is a testimony to the intrinsic architectural quality of Fathy's work; or perhaps it acknowledges Fathy's success in rediscovering an existing language of forms and rendering it more intelligible and available.

81 Kultermann, *Mimar*, no. 4, April / June 1982, p. 61.

CONCLUSION

Fathy's transition from the classical styles of the Beaux Arts to the creation of his traditional approach revealed his deep concern for establishing an Egyptian architectural identity. Vernacular ideals and values were to be fundamental to Fathy who sought a more direct confrontation with modernism. But, Fathy's interest in the cultural continuity of his country and his attitude towards modernism should not be taken as mistaken signs of anti-modernity. In fact, it was through a modernist western perspective that he viewed tradition. Modernism was a catalyst which helped Fathy to discover his national architecture as a kind of pure design. Inevitably, the criticism of the forms of modern architecture, which broke with the past, can be seen as an important means in increasing Fathy's understanding of the vernacular and regional culture in new ways, as well as leading him to perceive it as the antithesis of modern architecture. Undoubtedly, the acceleration of change and globalisation during the modern era contributed to Fathy's uncertainty about the direction his architecture should take as well as to his growing sense of a lack of personal and national identity. Fathy's attitude towards modernism and his continuous attack on the modernists' position may be interpreted as an attempt to exclude himself from the influence of Western culture, which can be recognised in many periods of his career.

When one follows Fathy's designs from the early 1940s to the late 1980s, one enters an entirely different world from that of modern architecture, a world in which traditional principles and forms have replaced the industrial revolution and the international style. The path from the Hamid Said house (1942) to the fully developed type of Fathy's own house (1971) thirty years later was not straightforward. It was a process of endless experiments, in which each new task allowed the reinforcement of Fathy's principles as well as demonstrating the range of his thinking and the precision with which he was able to convey meaning through architecture. The analysis of his works reveals that his ideas were imprinted with traditional values which encouraged simplicity, the honest use of local materials, the integration of the building with its surroundings and the expression of national identity. These characteristics, which were a constant theme in Fathy's architecture, demonstrate that his architectural approach fundamentally remained unchanged. Fathy showed boldness in his buildings' elevations, plans and

planning beyond any of his contemporaries in both Egypt and the Arab World. This boldness is particularly apparent in the siting of Fathy's own house in the north coast, which refers to his confident eye in placing all his buildings so they would be seen to best effect, and in turn command spectacular views over the surrounding buildings and landscape.

Looking back at the early 1940s from a distance of six decades, one is struck by Fathy's genuine architectural production. New Gourna of 1948 was an early experiment with Fathy's recently conceived theories as well as the various elements that constituted the principles of his designs. It encapsulated the path beyond vernacular architecture towards more distinguished forms of expression in which broad dispositions of simple masses and sequences of dynamic spaces were stressed. The beauty of the traditional architecture of New Gourna represents an art form that has resulted from an understanding of a unique mode of human life. However, New Gourna is clear evidence that Fathy did not fall into naïve simulation of a generalised vernacular and that he responded positively to the specificity of the local built environment.

Although, the application of Fathy's approach met some failures in his community projects, they represent a success at least as a model suggesting new possibilities. What helped Fathy to succeed in his designs was that he possessed an intuitive vision of what was most appropriate to the social state of his time. Over thirty years later Fathy looked back on this period and attempted to put in writing the guiding principles of his domestic designs. This is not to suggest that Fathy's approach was rigid and prescribed, but it allowed him a firm base, from which he experimented and confirmed his views of the regional vernacular. Undoubtedly, these views raised important questions and revealed that architects and town planners have to go back to the past in order to pick up valid concepts and insights to enhance their understanding of the timely needs of their profession.

Throughout his life, Fathy remained a rare example of an individual whose social conscience influenced his practice. Fathy had a vision of fulfilling the housing needs of the rural poor and maintaining the relationship between people and their environment. Although Fathy continually tried to realise this goal, his efforts never achieved the

results he aimed at. Sayed Ettouney, Professor of Urban Design, Cairo University, believes that Fathy's concept of housing the poor failed because it was in conflict with "hidden social and political directions". Ettouney believes that housing the poor and community architecture has always been the responsibility of an authoritarian central government, which Fathy had never come to terms with.[1] It is likely that Fathy's concept of housing the poor would have worked, had it been given a chance in a more favourable political situation.

Although, the analysis in chapter eight shows that the most original developments of Fathy's work are mostly associated with El-Wakil and El-Farouk, neither of them or any of his followers has taken on Fathy's message of housing the poor. While Fathy's "clients are the 1 billion people doomed to premature death",[2] El-Wakil has intentionally attempted to secure a place for traditional architecture by seeking influential patrons especially in the Arab world. Many critics, including Haroon Sugich and Prince Sultan ibn Salman, both advocates of Fathy's philosophy, argue that Fathy's idea of making architecture for the poor is a great but imperfect concept. Both share the belief that architectural form can not be established from below. While Prince Sultan ibn Salman argues that "Fathy's biggest... disadvantage was that he started with the poor people, among the *Fellaheen* [farmers], at the village in Gourna",[3] Sugich believes that architecture "must... filter down from the ruling elite".[4] However, it is likely that Fathy's failure, in part, to find a patron to support his ideas defeated his principal mission, making his contribution primarily a theoretical one. But, the pursuit of dreams is a peculiarly human preoccupation and Fathy's rare skill in building dreams, of making concrete what to others are ephemeral illusions, is his unique and admired gift, which gave him universal and timeless significance. In the forward to Fathy's book *Architecture for the Poor*, Polk argued that the questions which Fathy raised about housing the poor need "men of genius, sensitivity, and deep moral purpose" to find out solutions.[5] And here the distinction between Fathy and his followers is clear; he had a message and a lifelong commitment to convey it.

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1 Author's interview with Professor, Sayed Ettouney, 2000.
2 William Mares, Hassan Fathy. *Midwest Magazine*, 24 October 1971, p. 50.
3 Facey, *Aramco World*, July / August 1999, p. 45.
4 Haroon Sugish, Traditional Architecture Finds A Royal Patron. *Arts & The Islamic World*, v. 3, no. 4, Winter 1985 / Spring 1986, pp. 47-48.
5 Fathy, 1973, p. xii.

The preceding chapters have shown that, throughout his career, Fathy dealt with other intellectual and conceptual questions, such as issues of cultural expression, meaning, dwelling and architectural identity. Fathy's writings are motivated by concern about modern man's inability to reflect on existence. Yet, his rediscovery of ancient connotations and its broad meanings explored the potential of architecture to support dwelling as well as expressing the potential wealth of existence. There is no doubt that the placelessness resulting from the disregard of context in terms of site, topography, climate, tradition and culture were the impetus behind Fathy's sensitivity both to the physical and traditional context of the regions. This condition was subsequently identified by Norberg-Schulz as a product of the modern world.

> Modern man becomes 'worldless', and thus loses his own identity, as well as the sense of community and participation. Existence is experienced as 'meaningless' and man becomes 'homeless' because he does not any longer belong to a meaningful totality.[6]

Norberg-Schulz's statement implies that the term "world" has been understood not only as a description of physical features such as mountains, houses, people and activities, but also as a phenomenological description as a place of dwelling. This is the essence of understanding the world as the giver of identity, sense of community and sense of being. A "worldless" context therefore means a "placeless" context. The analysis of Fathy's philosophy shows that he realised that the phenomenon of placelessness within traditional communities threatened their existence and that he sought the retention of a sense of dwelling in opposition to the impacts of modernity and universality. For Fathy, placelessness increasingly constituted a source of destruction, which is evident both in the developed and the underdeveloped worlds. The issue is not only the replacement of old buildings by new ones, but also the way in which traditional ways of living are being modified and disappearing. For Norberg-Schulz, the notion of "meaningful totality", which is missing in modern life, led modern man to become a "stranger to the world and to himself".[7] This helps to explain Fathy's belief that the relationships between people in modern societies was the result of personal alienation and the loss of collective identity. Postmodern critics have highlighted this point and called for a

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6 Christian Norberg-Schulz, *Genius Loci: Towards A Phenomenology of Architecture*. New York, 1980, p. 12.

7 Ibid., p. 11.

greater awareness of the problems that arise from the universalising tendency of culture, modernity and globalisation of technology which provides so much of its momentum.

The different aspects of Fathy's architecture and ideology also show his concern to manage the impact of modern development on traditional societies and to find ways in which traditional communities can adopt aspects of modernity without becoming victims of modernity itself. The analysis in chapter six shows that Fathy explored the phenomenal interrelationships of dwelling/nature in communities' experience by investigating traditional architecture and the relevance of the traditional built environment to the environmental and cultural context. In New Gourna and New Bariz, Fathy showed an understanding of what went before, whether vernacular or modern and fused the past and the place to produce a significant built environment that is a physical representation of its history. Fathy also perceived the physical landscape as natural heritage and an integral part of architecture; his drawings include natural elements such as plants, animals, mountains, rivers, lakes and deserts, which provided links with the past, with the history of human habitation and settlement in their particular place. Fathy's work also represented the tangible integration of natural material, forms of building and patterns of life, which were earlier hardly considered part of the realm of architecture and urbanism. However, Fathy's awareness of the relationship between built environment, ecology and social issues and how they relate, interconnect and reflect each other offers an understanding of a philosophy of dwelling. Certainly, Fathy's methodological framework of analysis explores theoretical perspectives and gives insights into the phenomenological understanding of the built environment in a global sense.[8]

The preceding discussion shows that Fathy could be seen as responsible for introducing and framing many of the themes that have been important to the criticism of architecture in the second half of the twentieth century. But do Fathy's works entitle him to a distinguished place among twentieth century world architects? Today one would probably restrict the first rank to pioneers such as Wright and Le Corbusier, but it would

8 For example, David Seamon has explored the relationship between Heidegger's philosophy of dwelling and Fathy's practical work at New Gourna. See David Seamon, Heidegger's Notion of Dwelling and One Concrete Interpretation as Indicated by Hassan Fathy's Architecture for the Poor. *Geoscience & Man*, v. 24, 30 April 1984, pp. 43-53.

be useful to make comparisons between them in order to place Fathy among these savants. Fathy's attitude towards modern architecture in the 1940s was similar to that of Wright in the 1920s. Both architects intended to place their approach in opposition to the principles of modern architecture. Like Wright, who achieved a genuine style, Fathy distilled many levels of meaning in his traditional forms. But Wright was more successful than Fathy in the sense that his Organic architecture gained credit and grew independently from the International Style.

If one also examines Le Corbusier's work from the 1930s onward, one cannot ignore the unmistakable similarities between his objectives and those of Fathy and even the architectural language they used.[9] Both Le Corbusier's and Fathy's intentions were to assert an aesthetic appropriate to an architecture based on appreciating tradition and regional culture. Like Fathy, Le Corbusier realised the dehumanising aspects of the machine and their negative effects on people and environment. He experienced an essential transition in his architectural style, where the forms used in his architecture changed from modern to more traditional ones. Unlike his work in the 1920s, which was shaped by the 'Five Points for a New Architecture', Le Corbusier developed an architectural system that reflected his new interest in traditional forms. Like Fathy, Le Corbusier employed vaulted ceilings with load bearing walls in ways that combined traditional and modern construction. But unlike Fathy, Le Corbusier's buildings cannot be read as a response to a particular style such as the Islamic house, for they are more general in meaning. Despite these similarities between the two architects in a certain phase of their career, Fathy attacked Le Corbusier harshly in many of his writings. But this attitude might be interpreted as a continued interest on Fathy's part in Le Corbusier and that he used Le Corbusier's theories and their applications as measures for assessing his own work, ideas and success.

These comparisons, along with the earlier analysis of Fathy's ideology in chapter seven, further confirm his position as a central figure in the development of twentieth century architecture. Nevertheless, reservations have been expressed concerning the centrality of Fathy's place in the architecture of the twentieth century. Richards believed that "it would be a mistake to give Hassan Fathy too central a place in the evolution of

9 For more details about Le Corbusier's traditional work, see Chapter 7, pp. 199-200.

architecture today".[10] Mitchell also argues that Fathy was "a very important architect", but that his architecture did not represent a mass movement. He believes that there is not "any mass movement like the early modern movement now... I do not think anybody is going to generate a mass movement of the same kind [as the modern movement] in architecture ever again".[11] The argument is that the rural character of the vocabularies and the traditional building methods that Fathy evolved limited both their applicability and appropriateness to the urban context and to large-scale urbanisation. But, the question of Fathy's importance and influence on twentieth century architecture centres not only on issues of style or form, as most of Fathy's critics would seem to believe, but on the aspect of experiential possibilities made evident in his works as well as from his ideology and vision which offered practical solutions to the world's problems.

Seen from the perspective of the late twentieth century, the assessment is more positive. Nassamat Abdelkader, Professor of Housing, Cairo University, believes that Fathy's architecture has stimulated something like a mass movement, at least in Egypt and the Arab World. She argues that this is evident in the work of his followers, who choose Fathy's vernacular-model because it represents an authentic image of their country and people.[12] Similarly, while Fathy's early reflections on issues such as vernacular development and the environment, tradition, handicraft work and self-help building were initially formulated in opposition to modernist principles, they now conform to widespread present-day concerns. The recognition of the importance of tradition has also become widespread and Fathy's work and architectural themes have undoubtedly earned him a position high among his contemporaries.

Certainly, Fathy's excellent work, along with his ideas, have not only established a path to follow, but also raised questions about the dialogue between different cultures. Fathy's main aim was not to divide the world into two opposing camps, but to introduce a cross-cultural dialogue which affirmed the validity of both Western and non-Western cultures and architectures. He believed that they should complement one another. This

10 Richards, Serageldin and Rastorfer, 1985, p. 13.
11 Author's interview with William Mitchell, 2000.
12 Author's interview with Professor Nassamat Abdelkader, 2000.

is evident in his architecture, which exhibits cross-cultural exchanges as well as acknowledging the existence of communication, discussion and mutual recognition between the Islamic world and the West. Undoubtedly, Fathy created a constructive dialogue between the West and the East and that makes him especially important nowadays.

It should by now be clear that assessments of Fathy's position in twentieth century architecture are overwhelmingly positive. Indeed, it is possible, from the vantage point of the beginning of the twentieth first century, to argue that Fathy was one of the greatest architects of modern times. One of the characteristics of the major figures in the history of architecture such as Wright and Le Corbusier is that their works are continually being re-examined and re-evaluated. In Fathy's case, we are perhaps only now beginning to understand the full significance of his contribution to twentieth century architecture. It seems likely however, that our understanding of his work will continue to evolve as we try to find solutions to the architectural, social and economic problems of the twentieth-first century. Fathy's legacy is still there to be cultivated, explored, and even extended by future generations.

APPENDIX 1

CHRONOLOGY OF FATHY'S LIFE AND CAREER

23 March 1900	Born in Alexandria, Egypt.
1910 – 1914	Attended Muhammed Ali Primary School, Cairo.
1914 – 1918	Attended Khediviya High School, Cairo.
1919 – 1926	Attended the High School of Engineering, Architectural Section, University of King Fuad I (now University of Cairo), Cairo.
1926-1930	Worked at the Department of Municipal Affairs, Cairo.
1930-1946	Taught at the Faculty of Fine Arts, Cairo.
1937	The Mansoriya Exhibition - country houses for Lower Egypt.
1941	The first mud brick experimental housing in Bahtim, commissioned by the Royal Society of Agriculture, Egypt.
1945 - 1948	Appointed to the Department of Antiquities to design and supervise the project of New Gourna Village at Luxor, Egypt.
1949 - 1952	General Director of the School Building Department, Ministry of Education, Egypt.
1950	Appointed Consultant to the United Nations Refugee World Assistance in Palestine.
1953-1957	Returning to teaching at the Faculty of Fine Arts, Cairo. Head of the Architectural Department in 1954.
1957-1962	Joined Doxiadis Associates in Athens, Greece.
1963-1965	Director of Pilot Project for Housing, Ministry of Scientific Research, Cairo. Consultant to the Minister of Tourism, Cairo.
1964	Publication: *The New Metropolis and the Arab World*, New Delhi.
1964-1966	Lecturer in Philosophy and Aesthetics in Town Planning and Architecture Department at Al-Azhar University, Cairo.
1966	Appointed by the United Nations Organisation for Rural Development Project in Saudi Arabia.
1969	Publication: *Gourna: A Tale of Two Villages*, Cairo.

1971	Publication: *Urban Architecture in the Middle East*, Beirut.
1972	Publication: *The Arab House in the Urban Settings: Past, Present and Future*, London.
1973	Publication: *Architecture for the Poor: An Experiment in Rural Egypt*, Chicago.
1975-1977	Lecturer in Rural Housing, Faculty of Agriculture, Cairo University, Cairo.
1976 – 1980	Member of the Steering Committee of the Aga Khan Award for Architecture.
1976 – 1989	Founder and Director of the International Institute for Appropriate Technology, Cairo.
1981	An Exhibition of Selected Projects (catalogue), School of Architecture and Planning, MIT, USA.
1986	Publication: *Natural Energy and Vernacular Architecture: Principles and Examples with Reference to Hot Arid Climates*, Chicago.
29 November 1989	Died in his eighteenth-century Mamluk house, Cairo.

APPENDIX 2

AWARDS, AFFILIATIONS, CONFERENCES AND COMPETITIONS

AWARDS

1958	National Encouragement Prize of Architecture, Egypt.
1959	Ministry of Education Medal, Egypt.
	Encouragement Prize and Gold Medal of Fine Arts, Egypt.
1967	National Prize for Fine Arts and Republic Decoration, Egypt.
1970	National Medal of Arts, Egypt.
1979	United Nations Peace Medal.
1980	Chairman's Award, the Aga Khan Award for Architecture.
	The first Right Livelihood Award, Stockholm, Sweden.
	Engineering Syndicate Medal, Egypt.
	The Balzan Foundation Prize, Cairo.
	The Egyptian Antiquities Organisation Medal.
1984	Paule G. Hoffman Award.
	The first Honorary Doctorate of the American University in Cairo.
	The first Gold Medal of the Union Internationale des Architects.
1987	Titles of 'Academician' and 'Professor' from the International Academy of Architecture, Sophia, Turkey.
	The Louis Sullivan Special Award for Architecture.
1988	Honorary Award in Architecture, El-Menia University, Egypt.

AFFILIATIONS

1976	Honorary Fellow, American Institute of Architects, USA.
1977	Honorary Fellow, American Research Centre, Cairo.
1980	Member of the High Council of Literature, Cairo.
1985	Honorary Fellow of the Royal Institute of British Architects.

CONFERENCES

1960	"The New Metropolis in the Arab World", a seminar sponsored by the Congress for Cultural Freedom and the Egyptian Society of Engineers, from 17th to 22nd December, Cairo.
1963	The Thirteen International Course in Criminology, 22 June-10 July, Cairo.
1966	Symposium on Industrial Development in Africa, 27 January-10 February 1966
1968	The International Symposium of the History of Cairo, March / April, Cairo.
1969	The International Round Table Conference for the Architecture and Planning of Cairo, September, Cairo.
1974	The International Congress of Urban Planning, Persepolis, Iran.
1976	A special guest at Habitat, United Nations Conference on Human Settlements, 31 May-11 June, Vancouver, Canada.
1977	Rural Habitat in the Arab Countries, 6-11 November, Cairo.
1980	The International Symposium: Islamic Architecture and Urbanism, January 5-10, King Faisal University, Dammam, Saudi Arabia.

COMPETITIONS

C. 1957	Building a peasant house for the Ministry of Social Affairs, Egypt. 1st place.

APPENDIX 3

INTERVIEWS AND CORRESPONDENCES

Unless otherwise indicated, all interviews were in Egypt.

Recorded interviews:

Dr. Nawal Hassan	Head of 'Centre of Egyptian Civilisation Studies' and the new owner of Fathy's house in Sidi Kreir. (13 December 1999)
Najib Mahfouz	Nobel Prize-winning novelist, and Fathy's colleague in the Ministry of Culture. (3 January 2000)
Ahmed Abdou	Professor of Architecture, School of Fine Arts, Cairo, and Fathy's student during his University study. (6 January 2000)
Dr. Basel Diab	The new owner of Anderioli house (1981), Fayoum. (7 January 2000)
Mahmoud Foreag	A farmer, who still lives in the ruins of the Royal Society of Agriculture Farm. (22 January 2000)
William Mitchell	Dean of MIT School of Architecture and Planning, USA. The interview was following his public lecture at Misr International University, Cairo. (24 January 2000)
Abdel Hamid Ezzat	Fathy's nephew. (24 January 2000)
Suaad Hemmat	Fathy's niece. (24 January 2000)
Sayed Ettouney	Professor of Urban Design, Department of Architecture, Cairo University. (25 January 2000)
Nasamat Abdelkader	Professor of Housing, Department of Architecture, Cairo University. (25 January 2000)
Tuson Abu-Gabal	Owner of one of Fathy's early houses in 1940s. (25 January 2000)
Atef Fahiem	Professor of Architecture, Department of Architecture, School of Fine Arts, Cairo. (28 January 2000)
Mohamed Elhamy	Professor of Architecture, Department of Architecture, School of Fine Arts, Cairo. (28 January 2000)

Ahmed Abdel-Rady	Son of Fathy's personal guard during the construction of New Gourna village (1945). He is still living in Fathy's field house in New Gourna village. (4 February 2000)
Artists Hamid Said	Fathy's close friend and the owner of one of his early houses in 1940s. (10 February 2000)

Unrecorded interviews:

Amal Abdou	Senior lecturer, Architectural Department, School of Fine Arts and author of a Ph.D. thesis about the architecture of Hassan Fathy in 1993. (24 December 1999)
Ahmed El-Sakhawy	An architect, who valued the work and philosophy of Hassan Fathy. (24 January 2000)
Adel Salah	Professor of Architecture, Department of Architecture, School of Fine Arts. (28 January 2000)
Ibrahim Mahmoud	Bought and demolished 'Taher Al-Emari Farm (1942). (8 February 2000)
Bosayna Dappos	Professor in the School of Folk Arts, Cairo. She is member of the "Friends of Arts and Life" which was established by artist Hamid Said. (10 February 2000)
Pascale Ourgaut	A French architect who was conducting research about Fathy's Al-Saoura clinic in Kharga Oasis in order to initiate fund-raising for its preservation. (10 February 2000).
Lul'at Al-Sahara Village (1950)	Members of the community. (11 February 2000)

Correspondence:

Paul G. McHenry	Director of the Earth Building Foundation, Albuquerque, New Mexico. He hosted Fathy during his visit to Dar Al-Islam village in 1981. (6 April 1999)
Richards Rogers	Architect, London. (6 July 1999)
Clarence Aasen	Head of School of Design, Victoria University, Wellington, New Zealand. (7 July 1999)
Sir Norman Foster	Architect, London. (8 July 1999)

Caroline Simpson	One of Fathy's admirers, England. (8 July 1999)
Edward Said	Professor in English Department, Columbia University, New York. (9 July 1999)
Right Livelihood Award	Awarded Fathy its first award in 1980, Stockholm, Sweden. (10 August 1999)
Robert Venturi	Architec, Philadelphia. (3 January 2000)
Renata Holod	Professor in History of Art Department, University of Pennsylvania. (3 May 2001)
Simone Swan	Director of the Swan Group, Texas and one of Fathy's disciples. (13 May 2001)

APPENDIX 4

THE NUBIAN PROCESS OF CONSTRUCTING A VAULT WITHOUT CENTRING

The mud-bricks used for building a vault contain more straw than usual for lightness. Each brick measures 25cm x 15cm x 5cm and one large face is marked with two parallel diagonal grooves, drawn with the fingers from corner to corner in order to enable the brick to stick to a muddy surface by suction. Each room should have two, three-metre high side-walls and an end wall somewhat higher against which the vault is to be built. The masons lay a couple of planks across the side walls, close to the end wall, to stand on. Handfuls of mud are thrown against the raised end wall to roughly outline the arch of the vault, which springs from the side walls. The parabolic form of the arch is created entirely by eye, rather than by measurement (fig. 14). The mason then uses an adze to trim the mud plaster to give it a sharper outline. Next, masons working from opposite sides lay up the bricks till they meet at the apex of the vault.

The first brick stands on its end on the side-wall with the grooved face flat against the mud plaster of the end wall, and should be hammered well into the plaster. Then, with some mud, the mason makes a little wedge-shaped packing against the foot of this brick, so that the next course will lean slightly towards the end wall instead of standing upright (fig. 15). In order to break the line of the joints between the bricks the second course starts with a half-brick, on the top end of which stands a whole brick. (If the joints are in a straight line, the strength of the vault will be reduced and it may collapse.) Now the mason puts in more packing against the second course, so that the third course will incline even more acutely from the vertical. In this way the two masons gradually build the inclined courses out, each rising a little higher round the outline of the arch till the two curved lines of bricks meet at the top (fig. 16). As the masons build each complete course, they carefully fill in the gaps between the bricks composing the course with dry packing such as stones or broken pottery. It is very important that no mud mortar is put between the ends of the bricks in each course, for mud can shrink by up to 37 percent in volume, and will seriously distort the parabola and the vault may collapse. The ends of the bricks must touch one another dry, with no mortar.

At this stage, the nascent vault will be six bricks in thickness at its base but only one brick in thickness at the top, so that it appears to be leaning at a considerable angle against the end wall. Thus it presents an inclined face to lay the succeeding courses upon and consequently the bricks have plenty of support. This inclination, even without the two grooves, will stop the bricks from dropping off. In this way, the whole vault can be built straight out in the air, with no support or centring, and with no need for measuring instruments or even a drawn plan (fig. 17). On completion, the open end of the vault is filled in with claustra work.

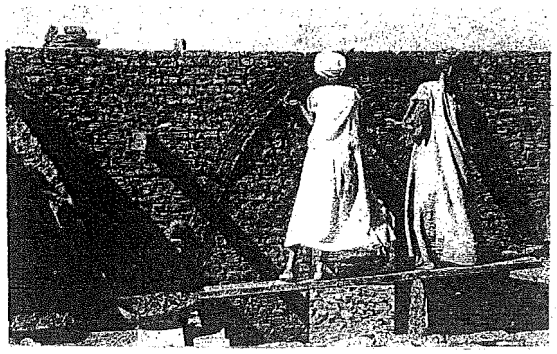

Fig. 14.

Fig. 15.

Fig. 16.

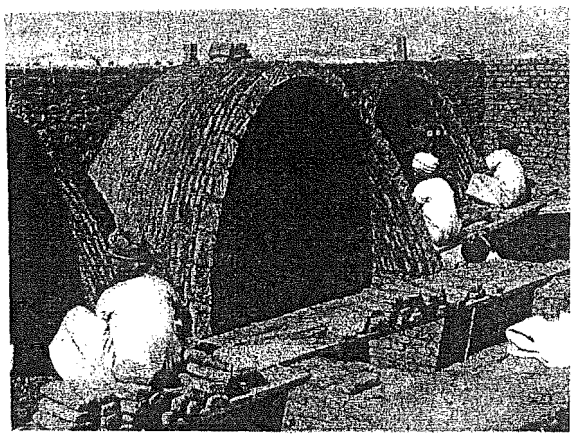

Fig. 17.

(Source: figs. 14-17, Fathy, 1973)

APPENDIX 5

GLOSSARY

Adze	Cutting tool with thin arched blade sharpened on concave side and set at right angles to handle.
Bādānāh	Tightly related group of ten to twenty families living in neighbouring houses, with recognised patriarch.
bādjār	A four-sided *mālqāf* closed with shutters.
Bārātsī	Lightweight roof truss constructed as a folded slab.
Brise-soleil	Louvre or screen to block off unwanted sunlight.
Claustrawork	Moldings and tracery in mud used to decorate doors and windows.
Dūrqā'āh	Central square of reception area (*qā'āh*), roofed with dome or *Shūkhshākhāh*.
'Īwān	Recessed area of room, usually open to centre of *qā'āh*.
Khān	Inn for foreign travellers arriving in town.
Loggia	Open-roofed gallery or arcade.
Mādrāsāh	Islamic school, often attached to mosque.
Mādyāfāh	Guest house or guest room.
Mājāz	Indirect entry.
Mālqāf	Device for catching wind at highest point of building.
Māshrābīyyāh	Oriel window with latticework screen.
Māzyārāh	Alcove for water jar.
Pendentive	Triangular, concave section of vaulting serving to support dome.
Qā'āh	Main hall in house, usually reception area.
Qīblāh	Direction of prayer.
Qūbbāh	Dome.
Sālsābīl	Kind of marble fountain in hall of house.

Shūkhshākhāh Vented lantern of dome.

Squinch Support (arc, lintel, or other) carried across corner of room under superimposed mass.

Tākhtābūsh Covered outdoor sitting area between two courtyards.

Note:

Arabic/English transliteration follow the English Transliteration System as published in the *International Journal of Middle East Studies*.

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THE ARCHITECTURE OF HASSAN FATHY: BETWEEN WESTERN AND NON-WESTERN PERSPECTIVES

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Volume Two

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CATALOGUE

(1928 - 1989)

Buildings and projects are classified into three types and listed chronologically. They are also identified by date of design, location and client's name.

I	Domestic Buildings	(D)
II	Commercial and Public Buildings	(C)
III	Villages	(V)

NOTES

1. Unless otherwise indicated, all buildings are in Egypt.
2. Unless otherwise indicated, all drawings are held by the American University in Cairo (AUC).
3. Hassan Fathy's drawings, now in the AUC, were catalogued by James Steele in *The Hassan Fathy Collection: A Catalogue of Visual Documents at The Aga Khan Award for Architecture* in 1989. More recently, the collection has been published on the web at www.archnect.org. Because of the many discrepancies found between Steele's summary catalogue and the drawings, now published on the web, descriptions of drawings below are based on the more recent source.
4. Because the drawings published on the web are unnumbered, references are given to Steele's numbering of individual buildings and projects.
5. An asterix indicates that this building or site was visited by the author in January-February 2000.

I. DOMESTIC BUILDINGS

D1. **Omar Villa** (construction unverified)

Date 1930
Location Giza
Client Husni Omar
Drawings Two drawings showing the front and rear elevations and a wall section.

Documentation
Steele, 1989. Code: 1011632

D2. **Al-Bariya Villa** (construction unverified)

Date 1930
Location Fumm Al-Khalig, Cairo
Client Sada Al-Bariya
Drawings One drawing showing plans.

Documentation
Steele, 1989. Code: 1011633

D3. **La Giardinara Kiosk** (construction unverified)

Date 1930
Location Bulaq, Cairo
Client Unknown
Drawings One drawing showing plan and elevation.

Documentation
Steele, 1989. Code: 1011634

D4. **El-Kachkachi Building** (construction unverified)

Date 1933
Location El-Dakhliya Street, Cairo
Client Mustafa Bey El-Kachkachi
Drawings Eleven drawings showing ground and typical floor plans, elevations and details.

Documentation
Steele, 1989. Code: 1011636

This six-storey building consists of a ground floor to be used as a printing workshop and five residential floors. Each floor consists of two identical apartments; each contains lobby, reception area, two bedrooms, toilet, bathroom and a kitchen.

Because the ground floor was used as a printing workshop, this building has been designated by other researchers as a commercial building. However, in this catalogue it is also classified as a commercial building; see C3.

D5. **Abd El-Malik Villa** (construction unverified)

Date 1934
Location El-Zeytoun, Cairo
Client Azmi Bey Abd El-Malik
Drawings Two drawings showing foundation plan, elevations and entry door details.

Documentation
Steele, 1989. Code: 1011639

D6. **Al-Beyli Villa** (construction unverified)

Date 1934
Location Cairo
Client Abd Al-Halim Bey Al-Beyli
Drawings Two drawings showing ground floor and elevations.

Documentation
Steele, 1989. Code: 1011637

D7. **Madkur Housing** (construction unverified)

Date 1934
Location Al-Muski, Cairo
Client Hassan Basha Madkur
Drawings Four drawings showing plans, elevation and cross section.

Documentation
Steele, 1989. Code: 1011638

This modern style three-storeyed building was intended to accommodate shops in the first level and apartments in the second and third levels.

D8. **Garvice Villa** (construction unverified)

Date 1937
Location Alexandria Desert Road between Cairo and Alexandria
Client Isabel Garvice
Drawings Two drawings showing elevations.

Documentation
Steele, 1989. Code: 1011640

D9.* **Al-Emari Villa** (demolished)

Date 1937
Location Sidmant Al-Gabal, Fayum
Client Taher Al-Emari Bey
Drawings Four drawings showing ground and first floor plans and elevations.

Documentation
Steele, 1989. Code: 1011641
Fathy, 1973, p. 11.
Richards, Serageldin and Rastorfer, 1985, p. 161.

Al-Emari also asked Fathy to build roofs for the existing buildings of his farm in Sedmant Al-Gabal on the edge of the desert of Fayum, near Cairo.

Demolition of this building and the farm has been verified by the author in 2000.

D10. **Al-Hariri Villa** (construction unverified)

Date 1938
Location Pyramids, Road, Giza
Client Mrs Al-Hariri
Drawings Three drawings showing ground floor plan, elevations and cross sections.

Documentation
Steele, 1989. Code: 1011642

D11. **Mohammed Fathy Villa** (construction unverified)

Date 1938
Location Kom Al-Akhdar, Giza
Client Mohammed Fathy
Drawings Seven drawings showing ground and first floor plans, elevations and cross sections.

Documentation
Steele, 1989. Code: 1011643

This villa was designed for Hassan Fathy's elder brother.

D12. Hayat Villa (construction unverified)

Date 1938
Location Dokki, Cairo
Client Artist Hayat Mohammad
Drawings Two drawings showing ground floor, elevation and cross section.

Documentation
Steele, 1989. Code: 1011644

D13. Hishmat Villa (construction unverified)

Date 1938
Location Dokki, Cairo
Client Zaynab Hanem Hishmat
Drawings Three drawings showing ground floor plan, foundation plan, elevations and cross sections.

Documentation
Steele, 1989. Code: 1011645

D14. Badran Villa (construction unverified)

Date 1940
Location Egypt
Client Mr Badran
Drawings Two drawings showing plans, foundation plan, elevation and grill details.

Documentation
Steele, 1989. Code: 1011646

D15. Al-Bakliya Resthouse (construction unverified)

Date 1940
Location Kafr Al-Hima
Client M. E. G. Takla Pasha
Drawings Two drawings showing ground floor plan and detail of fireplace.

Documentation
Steele, 1989. Code: 1011647

This single-storey house was intended as an addition for an existing villa within a walled compound.

D16.* **Al-Razik Villa** (unbuilt)

Date 1941
Location Abu-Girg
Client Ismail Abd Al-Razik
Drawings Nine drawings showing ground and first floor plans, elevations, cross sections and elevations in gouache.

Documentation
Steele, 1989. Code: 1011652

Although several villas for the Al-Razik family are standing in Abu-Girg, none of these corresponds to Fathy's design.

D17. **Farid-Bey Villa** (construction unverified)

Date 1941
Location Shalkan
Client Husayn Bey Farid
Drawings Four drawings showing ground and first floor plans, elevations, cross sections and detail of fireplace.

Documentation
Steele, 1989. Code: 1011653

Although this two-storey house exhibited Fathy's set of traditional values, flat roofs were used instead of domes and vaults and round arches were replaced by pointed arcades.

D18. **Takla Pasha Resthouse** (construction unverified)

Date 1941
Location Kafr Al-Hima
Client M. E. G. Takla Pasha
Drawings Six drawings showing ground and first floor plans and elevations.

Documentation
Steele, 1989. Code: 1011654

D19.* **Chilean Nitrate Company Resthouse** (demolished)

Date 1942
Location Safaga
Client Chilean Nitrate Company
Drawings Three drawings showing site plan and ground and first floor plans.

Documentation

Steele, 1989. Code: 1011655
Fathy, 1973, p. 14.
Richards, Serageldin and Rastorfer, 1985, p. 162.

The now demolished two-storey building was intended as a modest shelter for the staff of the company and then grew to become four spacious units. The ground floor plan shows repetitive units separated by a massive partition-wall and raised five steps above ground level. Each unit has a front and rear entrance. The front entrance leads to a vaulted sitting area, which can also be used as a sleeping alcove with a balcony facing the north and overlooking a wonderful view of the Red Sea. One continues through to the living area, which is provided with a fireplace in the corner. From the living area one can go to the laundry and the bathroom and the dining space. The rear entrance opens into the kitchen, which is attached to the dining space.

A clear distinction has been made between the three units intended for the workers and the fourth one, which was probably assigned to a senior staff. This is obvious in the larger area of the unit as well as the location of its entrances in different facades. It has an entrance opening into a lobby, which leads to a kitchen and bathroom to the right. To the left one can enter the dinning room, which opens into the living room and both are provided with fireplaces. The other entrance opens into a bedroom, which can also be attached to the living room as a sitting area. From the northern facade, a stair leads up to the first floor. It consists of a hall, separate bedrooms and a service area which includes kitchens, bathrooms and food and linen storage. The bedrooms share an arcaded terrace overlooking the sea, while a large communal room projects out of the facade to emphasise the visual effect of the repetitive units.

Demolition of this building has been verified by the author in 2000.

D20.* **Said House**

Date 1942
Location Marg
Client Hamid Said
Drawings Two drawings showing first and second phase plans, and cross sections.

Documentation

Steele, 1989. Code: 1011612
Fathy, 1973, p. 12.
Richards, Serageldin and Rastorfer, 1985, p. 161.

To reduce the cost of this single-storey house, Fathy scavenged an old wooden grille for the windows and cast-off doors as well as producing the required bricks on the site.

D21.* **Abd Al-Razik Villa** (unbuilt)

Date 1943
Location Bani-Mazar
Client Hassan Abd Al-Razik
Drawings One drawing showing ground floor plan and foundation plan.

Documentation
Steele, 1989. Code: 1011656

Although several villas for the Al-Razik family are standing in Bani-Mazar, none of these corresponds to Fathy's design.

D22. **Al-Bakri Villa** (construction unverified)

Date 1943
Location Zamalek, Cairo
Client Said Al-Bakri
Drawings One drawing showing plan and elevation.

Documentation
Steele, 1989. Code: 1011657

D23.* **Al-Nasr House**

Date 1945
Location Fayum
Client Minister of Agriculture, Hamdi Seif Al-Nasr
Drawings Five drawings showing plans and elevations.

Documentation
Steele, 1989. Code: 1011613
Richards, Serageldin and Rastorfer, 1985, p. 161.

Soon after the Chilean Nitrate Company project (D19), Fathy was approached by Hamdi Seif Al-Nasr, then the Minister of Agriculture, to build a rest-house for him to use during visits to his estate. The one-storey house was intended to be built on a long thin peninsula of land projecting into the Lake of Fayum, a town 80 kilometres west of Cairo. Fathy situated the main reception area on one side and the bedroom section on the other. The L-shaped plan consists of the main entrance, reception area, vaulted-kitchen, domed-bathroom and two bedrooms; one is covered by a dome and the other by a flat wooden roof.

Inspection by the author in January 2000, shows that the house is in a bad condition and its domes and vaults are seriously cracked and damaged. However, according to the people in the area, restoration will be very expensive because of the lack of the skilled-labourers who can build domes and vaults by the same traditional method of construction employed by Fathy.

D24. **Kallini House** (construction unverified)

Date 1945
Location Ezbet Kallini, Samalut, El-Menia
Client Fawzi Kallini
Drawings Four drawings showing ground and first floor plans, elevation and cross sections.

Documentation

Steele, 1989. Code: 1011658
Richards, Serageldin and Rastorfer, 1985, p. 161.

This two-storey house represents one of the most ingenious designs of the mid-1940s. The owner was a rich man and although he was Christian, he built public projects for both Moslems and Christians. Abu-Gabal, the friend for whom Fathy built a house in 1947 (D25), recalls that Kallini married a Moslem woman and built a mosque in Upper Egypt. Kallini's nationalist attitudes may explain why he approached Fathy to build a house containing Islamic features. This also reveals that these architectural elements were seen as part of the totality of Egyptian culture and were not regarded as exclusively Moslems. There is no evidence that this house was built and all we know about it is from the remaining drawings.

D25.* **Abu-Gabal House**

Date 1947
Location Giza
Client Tusun Abu-Gabal
Drawings Nine drawings showing first and second floor plans, foundation plan, elevations and cross section.

Documentation

Steele, 1989. Code: 1011660
Richards, Serageldin and Rastorfer, 1985, p. 161.

This house was photographed by the author in February 2000 and is illustrated below for the first time. There are also photographs of the house soon after its completion in the 1940s in possession of the owner.

D26. **Eid House** (construction unverified)

Date 1948
Location Zagazig
Client Mrs Raymond Eid
Drawings Five drawings showing ground floor, elevations and cross sections.

Documentation
Steele, 1989, p. 36.
Steele, 1997, p. 192.

D27. **Hassanein Villa** (demolished)

Date 1949
Location Maadi, Cairo
Client Aziza Hanem Hassanein
Drawings Fourteen drawings showing ground floor, elevations, cross sections and details.

Documentation
Steele, 1989. Code: 1011662

This house was built for Fathy's wife. After its demolition, Fathy designed another small house for her which has been completely changed and is now hard to recognise.

D28.* **Monastirli House**

Date 1950
Location Saqiyat Mekki, Giza
Client Mrs Attiya Monastirli
Drawings Ten drawings showing ground, mezzanine, first and second floor plans, elevations and cross section.

Documentation
Steele, 1989. Code: 1011617
Richards, Serageldin and Rastorfer, 1985, p. 162.

The ground floor of the three-storey house is based on a central hall, around which Fathy organised all the functional spaces. The main entrance leads down to a narrow corridor that bends twice before delivering one into the brightly-lit central hall with its view down to and across the Nile River. Here, a ceremonial stairway leads up to the first floor, which included a series of bedrooms around an internal open courtyard. To the left of the central hall, Fathy situated a library and two spacious reception rooms while to the right there is a large dining area, service room and a large kitchen. The reception room projects out over the river with corner-windows to make the most of the view. All these rooms are generously proportioned and decorated with ornamental plaster-work. They also have access to an open garden-courtyard overlooking the magnificent view of

the Nile River. Close to the entrance, is a corridor, which serves separate ladies and men's toilets as well as a lift, which leads up to the upper floors.

The house is now sold to a Saudi businessman, who does not allow people or researchers to study the architecture of the house.

D29.* **Stopplaere House**

Date 1950
Location West Luxor
Client Dr Alexander Stopplaere
Drawings Five drawings showing preliminary and final ground floor plan

Documentation

Steele, 1989. Code: 1011618
Richards, Serageldin and Rastorfer, 1985, p. 162.

This single-storey house occupies a magnificent ridge-like, linear site on the top of a cliff and overlooking the main entrance into the Valley of the Kings and Queens at Luxor. Fathy's first attempt was a square plan, but according to the specific characteristics of the linear site, he was compelled to change his plan into an elongated rectangle. Fathy arranged the house in two distinctive parts around a central courtyard and a forecourt. The first part contains Stopplaere's bedroom, bathroom and a private courtyard with a staircase leading up to the roof. The second part consists of common living areas, two guest bedrooms and services and another staircase. Circulation space was always a significant motive in most of Fathy's projects. From the forecourt the main entrance opens into a long skylighted gallery, which connects the two sides of the residence and provides an interesting illumination to the passage. This gallery is reminiscent of that used to join the two parts of the Hamid Said house (D20). Most of the spaces were covered by domes of different sizes. The large dome, which covers the reception area of the guests' wing, is characterised by stepped squinches at its base which gives the building a remarkable silhouette.

The house is now owned by the Ministry of Antiquities and access is very restricted.

D30.* **Zaki Villa** (demolished)

Date 1951
Location Ismail Pasha Kamel Street, Helwan, Cairo
Client Artist Shaaban Zaki
Drawings Three drawings showing ground and first floor plans.

Documentation

Steele, 1989. Code: 1011665

A two-storey house with a large painting studio and other social spaces arranged around an arcaded garden and pool.

Demolition of this building has been verified by the author in 2000.

D31. **Alexandria Resthouse** (construction unverified)

Date 1955
Location Aswan
Client Unknown
Drawings Three drawings showing site plan and ground and first floor plans.

Documentation
Steele, 1989. Code: 1011669

D32. **Musa Villa** (construction unverified)

Date 1955
Location Imbaba, Cairo
Client Muhammad Musa
Drawings One drawing showing ground and first floor plan.

Documentation
Steele, 1989. Code: 1011670

D33. **Arab Refugee Housing** (construction unverified)

Date 1957
Location Gazza, Palestine
Client Unknown
Drawings One drawing showing a proposed town plan and units drawings.

Documentation
Steele, 1989. Code: 1011671

This project was intended as a temporary housing for Palestinian refugees.

D34. **Baume-Marpent Resthouse** (construction unverified)

Date 1959
Location Kharga Oasis
Client Baume-Marpent Enterprise
Drawings Two drawings showing site plan and ground floor plan.

Documentation
Steele, 1989. Code: 1011667
Richards, Serageldin and Rastorfer, 1985, p. 167.

This project was intended as dormitory-style sleeping units for the staff of the Baume-Marpent Enterprise at the Kharga Oasis.

D35. **Fathy Apartment** (construction unverified)

Date 1960
Location Unknown
Client Ali Bey Fathy
Drawings Three drawings showing upper and lower level plans.

Documentation
Steele, 1989. Code: 1011673

This apartment was designed for Hassan Fathy's brother who told Fathy about the Nubians' village in Aswan.

D36. **Maaruf Housing** (construction unverified)

Date 1960
Location 6 Harat Al-Sheikh Bakr, El-Khalifa, Cairo
Client Maaruf Muhammad Maaruf and Muhammad Saad
Drawings One drawing showing ground and first floor plans and elevation.

Documentation
Steele, 1989. Code: 1011676

D37. **Ambassador Villa** (construction unverified)

Date 1960
Location Niamey, Nigeria
Client Ambassador of Nigeria
Drawings One drawing showing ground floor plan.

Documentation
Steele, 1989. Code: 1011674

D38. **Carr House** (unbuilt)

Date 1962
Location Liodessi Street, Athens, Greece
Client Marion Carr
Drawings One drawing showing ground floor plan and elevations

Documentation
Steele, 1989. Code: 1011681

A single-storey house with a central courtyard. To the north side of the courtyard, Fathy situated a corridor leading to the bathroom and two bedrooms with openings to the east. On the other side were the kitchen, bathroom and laundry, all opening to the west. A considerable living area with fireplace and a third bedroom with terrace for Marion Carr, were overlooking the east.

D39. **Ahmed Villa** (construction unverified)

Date 1963
Location Hyderabad, India
Client Shri Zahir Ahmed
Drawings Two drawings showing ground floor plan, elevation and perspective.

Documentation
Steele, 1989. Code: 1011680

D40. **Roshdi Said House** (construction unverified)

Date 1965
Location Maadi, Cairo
Client Roshdi Said
Drawings Ten drawings showing ground and first floor plans, elevations and cross sections.

Documentation
Steele, 1989. Code: 1011682

D41. **Al-Dariya Housing** (one prototype built)

Date 1966
Location Al-Dariya, Saudi Arabia
Client The Ministry of Social Affairs
Drawings Seven drawings showing plans, elevations and cross sections of different remodelled houses.

Documentation
Steele, 1989. Code: 1011707
Fathy, Model Houses for El Dareeya, Saudi Arabia. *Ekistics*, March 21, 1966, pp. 214-219.
Fathy, Model of Rural Housing for Saudi Arabia. *Ekistics*, September 22, 1966, pp. 203-204.
Fathy, Report of the Execution of the First Stage of the Rural Housing Project, Saudi Arabia, c. 1967. Ms., FAAUC, no. 103. (in Arabic)

Al-Dariya Housing project was one of the most important housing projects that Fathy received after his return from Athens. Al-Dariya is a small town located on a high cliff

overlooking Wadi Hanifa Valley and is fifteen kilometres north-west Riyadh, in the central region of the Najd. It is isolated in the middle of a large expanse of desert which has ensured its security and preserved it from foreign influences. This isolation allowed a distinctive architectural character to evolve. In 1818 troops of Mohammed Ali of Egypt attacked the town of Al-Dariya because of its strategic defensive location. As a result many of the buildings were destroyed or badly damaged. All that remained were two hundred houses and the ruins of palaces and other public buildings.

In the developed model Fathy incorporated a traditional bathroom which is used in the urban areas of the Middle East. This kind of bathroom consisted of two compartments. The first is used as a place for changing clothes and as a rest area after the bath. The second contains a small basin supplied with cold water coming from a tank installed at the top of the house and hot water coming from a heater outside the bathroom. The first compartment is also considered as an intermediate degree of temperature between the bathroom and the outside so that the body will be able to adjust itself to the cooler conditions outside. In terms of the toilet, Fathy recommended a septic tank and that the kitchen should include storage for fuel, chimney, sink and a store-room. To increase the shaded area in the roof, Fathy designed it at different levels. He also incorporated a corbel dome in order to reduce the use of wood and in turn the need for importing materials.

Since the habit of sleeping on the roof is part of the tradition of the area, Fathy provided the reception room with corridors and stairs leading to a roof terrace. He also included another entrance to be used by the family or close friends. It leads to the bedrooms, family living, kitchen and facilities as well as to another stair which leads to a part of the roof which is entirely isolated from the guest roof. New items have been introduced in the bedrooms such as built-in closets and platforms for beds in winter. Fathy also suggested a system of air-receivers in a way that one receiver serves more than one bedroom.

D42.* **Riad House**

Date 1967
Location Saqqara Road, Shabramant, Giza
Client Dr Fouad Riad
Drawings Five drawings showing ground floor plan, elevations and cross sections.

Documentation

Steele, 1989. Code: 1011621
Richards, Serageldin and Rastorfer, 1985, p. 165.

The preliminary program of this single-storey house was conceived as a small retreat for a family with two children. The house consists of a domed entrance hall with a vaulted kitchen and bathroom to the left. One can go straight forward to the reception area, the central part of which is covered with a large dome. This dome is built on squinches and provided with rounded coloured glass openings to allow a pleasant light in. To the right of the main entrance, there are two openings; the first is a door which leads to the rear garden, while the other leads to a wing of three bedrooms and a bathroom, which was

added after the project began. This wing, which was conceived with the children in mind, is physically connected to the house but visually separated from the main building and referred to as the "doll house".

D43. Mehrez Apartment

Date 1967
Location Cairo
Client Shahira Mehrez
Drawings Three drawings showing plan and cross sections.

Documentation
Steele, 1989. Code: 1011620
Richards, Serageldin and Rastorfer, 1985, p. 165.

The plan of the apartment consists of a vestibule leading into a formal large sitting room with a fireplace and connected to a small library. Here one can go through an opening into an open-patio, which is intended to be used as a sitting area during summer time. From the vestibule one can enter to a private living area which is provided with another fireplace and is also connected to the open-patio. The sitting area is covered by a *shukshaykha* / *malkaf* (cupola / wind-catch) combination to allow natural ventilation; a feature which Fathy employed in many of his subsequent works such as Al-Sasbah palace (1978) (D56). There is also a kitchen close to the private living area with access to the shop / office side. A master bedroom suite with dressing area and sunken Japanese bathroom with a skylight are also connected with the vestibule.

D44. IFAO Field House (construction unverified)

Date 1970
Location Unkown
Client Institute Français de L'Archéologie Orientale in Cairo
Drawings One drawing showing ground floor plan and sections.

Documentation
Steele, 1989. Code: 1011688

This project was intended as a six-unit staff quarters. Each unit consists of a domed central *qa'a*, with two flanking sleeping *iwans* and an ensuite bath. All units are ventilated by a *malqaf*.

D45. **Jeddah Duplex Housing** (construction unverified)

Date 1970
Location Jeddah, Saudi Arabia
Client Unknown
Drawings Four drawings showing ground and first floor plans, elevation and section.

Documentation
Steele, 1989. Code: 1011689

A two-storey housing-block consisting of three different kinds of unit arranged around an enclosed central courtyard.

D46. **Priest's House** (construction unverified)

Date 1970
Location Garagus, North Cairo
Client Father de Montgolfier
Drawings Two drawings showing ground and first floor plans, elevations and cross sections.

Documentation
Steele, 1989. Code: 1011692

D47. **Sadruddin Aga Khan House** (unbuilt)

Date 1970
Location Aswan
Client Prince Sadruddin Aga Khan
Drawings Two drawings showing ground floor plan, elevations and cross sections.

Documentation
Steele, 1989. Code: 1011693
Richards, Serageldin and Rastorfer, 1985, p. 167.

D48. **Shahnaz Villa** (construction unverified)

Date 1970
Location Luxor
Client Princess Shahnaz
Drawings One drawing showing ground floor plan.

Documentation
Steele, 1989. Code: 1011694

D49. **Siddiq Villa** (construction unverified)

Date 1970
Location Unknown
Client Rateb Siddiq
Drawings One drawing showing plan and elevations.

Documentation

Steele, 1989. Code: 1011696
Richards, Serageldin and Rastorfer, 1985, p. 168.

D50. **Ghaleb House** (construction unverified)

Date 1971
Location Pyramid, Giza
Client Murad Ghaleb
Drawings Five drawings showing ground floor plan, elevations and cross sections.

Documentation

Steele, 1989. Code: 1011701

D51.* **Hassan Fathy House**

Date 1971
Location Sidi Krier, North Coast
Client Hassan Fathy
Drawings Four drawings showing site plan, ground floor plan, elevations and cross sections.

Documentation

Steele, 1989. Code: 1011624
Fathy, To Build a House, the House in Sidi Kreir [Fathy's own House], c.1971. Ms., FAAUC, no. 193.

Like his wife's house of 1949 (D27), Fathy designed a blank wall facade towards the public side and another one opens to the view of the sea to gain privacy. In front of the house, Fathy situated a pump-room for an artesian well to supply the house with water source. Simple in its structure and form but complicated in its function, this room represents a lesson in the application of a wind-escape. Fathy admitted that it happened by accident when he had to put the pump room about six meters below ground level because the level of the underground water was twelve meters deep. It was feared that the exhaust gases of the pump-engine would pollute the air in this room. However to generate a steady air movement, Fathy provided the room with an opening overlooking the well for the passage of water pipes as well as for inspection. On the ground level he covered the room with a slanting-vault roof with the higher end toward the leeward side and covered the well with a bell-like wind-catch to let the air in. According to the aerodynamic concept the vaulted-roofing arrangement represented a low-pressure zone

and created a strong air current, which drew air through the well-shaft opening at ground level. The concept of the wind-escape system was applied effectively in the market place of New Bariz village of 1967 (V8) to circulate the air in the basement.

D52. Polk House (construction unverified)

Date 1972
Location Colorado, USA
Client William R. Polk
Drawings Eleven drawings showing site plan, ground and first floor plans, elevations and cross sections.

Documentation

Steele, 1989. Code: 1011703
Richards, Serageldin and Rastorfer, 1985, p. 165.

This two-storeyed house was intended to be a small mountain resort with seven bedrooms, living area, services and a swimming pool.

D53. Nassif House

Date 1974
Location Jeddah, Saudi Arabia
Client Dr Abd Al-Rahman Nassif
Drawings Three drawings showing plans, elevations and cross sections

Documentation

Steele, 1989. Code: 1011625
Sharief Alkhateeb, The New Traditional Home of the Man Who Lived in the Beit Nasif. *Saudi Gazette*, 20 September 1979, p. 5.

Nassif's concern about architecture led him to travel extensively around India, Oman, Southeast Asia, North Africa and Spain, in order to study old Islamic buildings and whenever possible buy materials appropriate to the construction of his house. He bought wood from Japan, Pakistan and India and turned them into hand-carved panels for the doors and the main atrium. Another remarkable structure is the massive wooden gazebo in the middle of the garden, which is reminiscent of that at the Muhammad Ali Palace in Cairo. The house is also characterised by a 4.5-by-15-metre pool in the garden, which was outlined in an ancient pattern. Although the pool was well-maintained and supplied with fresh water, Nassif dug a large well behind it, provided with pipe to draw water from the sea. He believed that sea water is more antiseptic than fresh water.

The structure of the house took two years to complete, while the whole house was completed in six years, at a cost of approximately six million rials. Two of the architect's master masons from Nubia, who spent six months on site, helped in building the structure of the house. One of the masons was also Aladdin Mustafa, who accompanied Fathy in most of his work outside Egypt, especially Dar Al-Islam Centre

in New Mexico (1980). The house has undergone some alterations, but the most important one was due to an interest in the Moroccan cuisine in Nassif's family, who changed a small part of the house into a restaurant.

D54. V.I.P. House (construction unverified)

Date 1974
Location Tabuk, Saudi Arabia
Client Government of Saudi Arabia
Drawings Sixteen drawings showing site plan, ground floor plan, elevations, cross sections and details.

Documentation

Steele, 1989. Code: 1011706

Fathy, Discussion of Data for the V.I.P. Vila in Tabuk, a Report submitted to the Authorities responsible for the Decision on the Design for the V.I.P., 20 February 1974. Ms., FAAUC, no. 186.

Fathy, The Excution of the Special Works in the V.I.P. House in Tabuk, a Report Submitted to the Chief of Engineering Division Mediterranean Division, 18 November 1975. Ms., FAAUC, no. 188.

While working on the Nassif house (D53) Fathy was commissioned by Colonel, Mahmoud Nassif, on behalf of the government in Saudi Arabia to design the V.I.P. villa in the desert of Tabuk town in 1974. Fathy argued that this project presented several considerable problems including the architectural character, climate, building materials and the design concepts. He explained that it was a challenge for the modern architect to implant a modern house in the Arab tradition in the desert, when this tradition had existed in common practice a long time ago.

Fathy orientated the house according to the climatic conditions of the area with the longer axis running east-west. This position would allow desirable cross-ventilation and create natural air movement within the rooms. The one-floor house consisted of two main parts; the men's reception quarter and the family quarter. The reception quarter consisted of an entrance vestibule from the main court, the main reception hall, dinning room with hand washing arrangement, library with its own patio, cloakrooms and guest lavatories, kitchen, loggia and a covered car-port. The family quarter contains reception hall, the master bedroom with private patio, three bedrooms with dressing and bathrooms, cloakroom and lavatory for the family members and a gallery connecting it with the reception quarter. There is also a servant's quarter with an access to the family quarter which consisted of two bedrooms and a bath-wash-room.

In terms of the garden, Fathy believed that a large western garden with a large lawn would not be appropriate in this climate. However, he designed several walled gardens, each arranged in the oriental way with paved alleys, water basins and the special kinds of trees, flowers and vegetables. Fathy believed that "following the idea of enclosed gardens, each will be easy to keep green and protect against the sandstorms and desert winds, at the same time adding to the charm of the ensemble". Fathy also suggested two proposals for including a swimming pool. The first was to have one directly connected

with the master bedroom with access to the other bedrooms and guests' quarter or having it separately in the garden, equipped with dressing and bathrooms.

There is no firm evidence of this house being built, but the existence of a complete set of working drawings and extensive details of special works suggests that it was. The above mentioned two letters indicate Fathy's involvement in this project for about one and half years. While the first letter was about the concept of the design, the other one was discussing the execution of the special works such as the wood works, marble works, plaster works, stone works and the construction of the domes out of brick. The scarcity of photographs for this project might be attributed both to the high ranking position of the occupant in the army of Saudi Arabia and the location of the house in a military territory.

D55.* **Sami House**

Date 1978
Location Dahshur, Giza
Client Akil Sami
Drawings Two drawings showing a ground floor plan and cross sections.

Documentation

Steele, 1989. Code: 1011626
Richards, Serageldin and Rastorfer, 1985, p. 167.

D56. **Al-Sabah House**

Date 1978
Location Fentas, Kuwait
Client Prince Nasser Al-Sabah
Drawings Nine drawings showing ground floor plan, elevations and cross sections.

Documentation

Steele, 1989. Code: 1011712
Richards, Serageldin and Rastorfer, 1985, p. 168.
Mohamed Maged Khlosi, *Hassan Fathy*. Beirut, 1997, pp. 177-180.

Fathy's main design concept for this two-storey house was to achieve the complete separation between the public and private spaces. He designed two rectangular zones separated by an axial wall that runs the whole width of the plan. The idea of each zone was based on arranging its spaces around internal open courtyards. Fathy offset each of these areas along the dividing wall in order to allow the main domed entrance for guests in the north facade. At the opposite wall, which overlooks the central courtyard, there is a ceremonial stair leading up to the first floor.

The central space of the main reception area, which is the highest space in the house, is covered by an octagonal *shukshaykha*. As in the Nassif house (1974) (D53) and the V.I.P. house (1974) (D54), both in Saudi Arabia, Fathy preferred to employ this type of

roof because of its greater association with the region than his usual dome. Although the *shukshaykha* and the fine pergola nearby are from the same tectonic family, they have a particular elegance all of their own. To achieve natural ventilation Fathy provided the main reception area with a wind-catch to let the cool air in, while the hot air escapes out through the *shukshayka*. A single stair attached to the wind-catch, links this formal zone with the private zone on the other side of the central dividing wall.

As in the reception zone, Fathy also used two courtyards to serve as points of orientation of the family zone. These courts are relatively small in scale in order to achieve the more domestic and intimate character of this area. On two sides of the square court, which is more centrally located, Fathy arranged the children's bedrooms. Each bedroom has its own bathroom and consists of a square central space covered by a shallow dome and a lower sleeping *iwan*. This change of scale within the bedroom makes it more comfortable. In contrast to this square court, the other one is rectilinear and serves as an inner focus as well as to provide light to the master bedroom. Fathy situated this court between the master bedroom and a three-bay sitting area, which has a screened view to the gulf.

The first floor consists of *maqa'ad* (sitting area) above the guests' gallery and a string of rooms lining the exterior wall of the house. Both are separated by a long narrow corridor. The *maqa'ad* is classical in proportion, detailing and orientation as well as overlooking the central courtyard. The rooms behind the *maqa'ad* were intended to be service kitchens for the guest gallery below, but have now been converted into libraries to house the owner's collection of books and to be also used as quite areas for study and reading.

The facades are read as horizontal blocks, an effect that Fathy skilfully accentuated by the use of domes, vaults and the wind-catch.

This house is documented by Steele as only designed, but it was built and photographs of it are found in Fathy's archive as well as published in Khlosi, 1997.

D57. **Centre for the Development of the Northern Coast** (unbuilt)

Date 1978
Location Sidi Krier, North Coast
Client The Planning Commission for the Development of Sidi Krier
Drawings One drawing showing plan and elevation.

Documentation

Fathy, Construction of the North-Coast Centre in Sidi-Krier, a Report submitted to the Minister of Construction and the New Settlements, 24 November 1978. Ms., FAAUC, no. 189. (in Arabic)
Fathy, A Letter to the Planning Commission for the Development of Sidi Krier, 10 December 1978. Ms., FAAUC, no. 190.
Fathy, Notes on the Construction of the North-Coast Centre in Sidi-Krier, a Report submitted to the Minister of Construction and the New Settlements, 21 January 1979. Ms., FAAUC, no. 191. (in Arabic)

D58. **Petroleum Company Resthouse** (construction unverified)

Date 1978
Location Ras Ghareb, Red Sea Coast
Client Unknown
Drawings One drawing showing ground floor plan.

Documentation

Steele, 1989. Code: 1011710

D59. **Alpha Bianca House**

Date 1979
Location Alcudia Street, Majorca, Spain
Client The artists Yannick Vu and Ben Jackober
Drawings Six drawings showing ground floor plan, foundation plan, elevations and cross sections.

Documentation

Steele, 1989. Code: 1011714

G. Y. Dryansky, A Hispano-Moresque Legacy on Majorca: Old Beams and Ancient Crafts root a Contemporary Artist's House in the Past. *Architectural Digest*, v. 47, August 1990, pp. 94-98.

The plan of the ground floor of this two-storey house was conceived as two distinctive parts organised around three sides of the 17 by 25 meter courtyard, with a deep arcade in the fourth side. The courtyard is well landscaped and includes a rectangular pool in the middle, which is linked to two square fountains. A balcony on the first floor runs along the four sides of the courtyard and is provided with a claustra-work balustrade. The first part is arranged on two sides of the courtyard and contains the family spaces. On one side, the main entrance leads to a private living / library area, a large Moroccan reception room and the artists' atelier attached to service rooms. A large kitchen is situated close to the dining room and both open into a foyer, which has access to the courtyard. The second part consists of two separate functions separated by a summer dining room. The first includes a service entrance, which leads to the servants' room, toilet and laundry and also to the kitchen. The second consists of two guest bedrooms, each with its separate bathroom. The physical separation of functions and levels ensures that each space has its own character.

D60.* **Kazerouni House**

Date 1979
Location Shabramant, Giza
Client Samiha and Nazly Kazerouni
Drawings Eight drawings showing ground and first floor plans, elevations and cross sections.

Documentation

Steele, 1989. Code: 1011627

Robert Hefferon & Deborah Hefferon, House Glorious: Where Every Step Has A Meaning. *Cairo Today*, v.3, no.10, October 1982, pp.44-48.

Beverly Anderson, Country Retreat. *Cairo Today*, v.12, no.2, February 1991, pp.56-59.

Shadia Iskandar, House & Garden. *Egypt Today*, v.18, no.5, May 1997, pp.84-89.

Fathy arranged the functions of the house on two floors. The ground floor consists of an entry space, a formal reception area, two bedrooms, a bathroom, a storage area and a kitchen. The kitchen is large and has an access to a small courtyard which contains a stone oven for baking bread and a terrace covered by grape plants. To achieve privacy, Fathy situated the bedrooms on one side of the courtyard and the reception area on the other. The main reception area is large, light and well proportioned. It consists of a central space covered by large dome, and flanked by two *iwans* on different levels. One *iwan* is used as a sitting area and provided with a massive fireplace, while the other is a spacious and well-lighted dinning area. The reception area also leads to a domed meditating area, and being open to the reception spaces creates a sense of expansiveness that is quite different from the rigidly subdivided spaces of the vernacular Egyptian house.

To the right of the hallway, there is a corridor leading to two domed bedrooms and a large bathroom between them. The larger bedrooms have a secondary staircase which leads up to a study room in the first floor and a loft overlooking the bedroom itself. From the bedroom corridor, there is a staircase leading up to the first floor which includes the family living area, the master bedroom, the bathroom and a small sitting area. The living area is spacious and provided with a fireplace and has access onto the terrace which overlooks the main courtyard and the loggia and takes advantage of the panoramic view of the surrounding green fields and the pyramids.

In the 1970s, the Kazerouni sisters, along with folkloric researcher and collector Shahira Mehrez, for whom Fathy renovated an apartment in 1967 (D43), opened a gallery called Mit Rehan in Zamalek, a suburb in Cairo, to exhibit and sell traditional nomadic crafts. However the sisters used some of these traditional items to decorate the house. They covered the floor of the reception area with wool *kilims* (rugs) and straw floor mats and put ceramic pottery around the corners. To blend naturally with the village character, they furnished the spaces with old furniture such as old wooden settees, brass trays and wooden chests. On the walls they hung a collection of Arabic brass stamps, many of which are copies of Fatimid designs. In this way of decoration and space arrangements, Nazly believed that the house "is a perfect place to relax with friends and family on weekends". Similarly, the owners created a traditional environment to the gardens surrounding the house by situating a palm wood pergola and a mud-brick pigeon house, typical of Egyptian villages, overlooking the vegetable patch. On the grassy area adjoining the house they also situated two antique wooden settees from a *narwag* (ox-drawn cart used to till the soil).

The house was built by a team of four stone cutters, four masons, four assistant masons and six carriers. The construction of the house was supervised by Mahmoud Fahmy, a

relative of the owner and was built in 272 building days. According to Richards, girls from the village worked as carriers in order to save money to enhance their prospects for marriage. Fahmy recalled that the girls worked tirelessly to prove their strength to the unmarried men. As a result three of them were married by three of the assistant masons.

In 1996, a "Student Case Study Competition" was held in the United States and Canada, in which 279 students from 22 faculties and 19 schools of architecture participated. First place went to Ihab Elzeyadi from the University of Wisconsin, whose case study entitled "A Tale of Two Houses: Environmental Quality. Sustainability, and Indoor Comfort inside Hassan Fathy's Mit Rehan and a Contemporary Villa in Cairo". Both houses were of the same size, area and number of floors. The outcome of the study proved that Fathy's neo-traditional houses save energy over their contemporary modern counterparts. (http: // arch.ced.berkeley.edu/vitalsigns/act/1996comp/winners.html)

D61. **Al-Naggar House** (construction unverified)

Date 1980
Location Majorca, Spain
Client Mustafa Al-Naggar

Documentation

Steele, 1997, p. 200.
Richards, Serageldin and Rastorfer, 1985, p. 167.

In *Hassan Fathy* (1985) by Richards, Serageldin and Rastorfer, the house is recorded as constructed, while Steele in his *An Architecture for People* (1997) documented the house as unverified.

D62.* **El-Menia Housing Complex** (unbuilt)

Date 1980
Location Ezbet Noay, El-Menia
Client Ministry of Agriculture
Drawings Eight drawings showing site plan, plans, elevations and cross sections.

Documentation

Steele, 1989. Code: 1011716

Inspection of the proposed site by the author in 2000 proved that this project was never built.

D63.* **Greiss House**

Date 1980
Location Saqqara Road, Shabramant, Giza
Client Murad Greiss
Drawings Nine drawings showing ground floor plan, elevations, cross sections and details.

Documentation
Steele, 1989. Code: 1011629
Richards, Serageldin and Rastorfer, 1985, p. 168.

This two-storey house stands on the Sakkara Road outside Cairo and near to the Fouad Riad house (D42). The house was intended to be used as a weekend retreat and its building was finished in 1984. The influence of the medieval houses of Cairo on Fathy was very obvious in designing this house. The basic spatial arrangement remains a constant theme throughout the building. The concept of privacy was also achieved by separating the private bedroom area from the guest area. This has been realised by situating them on different levels.

However, one flight of stairs leads to the main entrance, which opens into a domed entrance lobby. It leads to a long yet wide entrance hall, which opens into the formal reception to the left. To the right there is a staircase, which leads, either up to the bedroom wing or down to a garden-courtyard. The reception area is flanked by two vaulted *iwans*. The first is used as a dining area and the second as a sitting space. There is another big courtyard where Fathy situated a kidney-shaped swimming pool. The kitchen and a toilet for guests were served by a small corridor and situated cleverly close to the reception area and with access into the paved courtyard. The bedroom wing consists of two bedrooms, bathroom and a private living area. Fathy applied the same design concept of the reception area to the master bedroom. It also consists of a domed central area, flanked by two domed spaces, which are used as a sleeping area and a dressing area. From the secondary bedroom a stairwell leads up to the roof of the house. The architecture of the house maintains a restrained geometrical order capable of adaptation and reveals Fathy's obsession with the climatic and social features of the traditional Egyptian typologies

The house was built by skilled masons from Nubia, but because of difficulties of labour management and quality control during the construction, the owner had to supervise the construction process himself. He also employed his own team of skilled workers from Cairo to work together with labourers from the area.

D64. **Mustafa House** (construction unverified)

Date 1981
Location El-Mahamid Street, Edfu, Upper Egypt
Client Aladdin Mustafa
Drawings Three drawings showing a ground floor plan, elevations and cross sections.

Documentation
Steele, 1989. Code: 1011718

D65. Sadeq House

Date 1981
Location Giza
Client Hatem Sadeq
Drawings Eight drawings showing plans, elevations and cross sections.

Documentation
Steele, 1989. Code: 1011719

D66. Presidential Resthouse

Date 1981
Location Garf Husein, Aswan
Client The Government of Egypt
Drawings Thirty two drawings showing site plan, plans, elevations and cross sections.

Documentation
Steele, 1989. Code: 1011630
Fathy, A Report of the Presidential Rest House, Aswan, 20 March 1980. Ms., FAAUC, no. 224. (in Arabic)

This resthouse consists of three separate buildings. The first building was intended for President Sadat's security police and bodyguards, who accompanied the president on his official trips. It is a one storey building and its plan consists of a domed entrance, twelve bedrooms with their bathroom and four corner suites intended for men of higher ranks. All rooms are arranged around a long rectangular, central courtyard. To make the building self-sufficient, Fathy located a dining hall in the middle of the courtyard. All rooms are domed, while the bathrooms are vaulted. The second building of the complex was intended for important guests and Sadat's extended family. This building is separated from the security block by a landscaped area, but attached to the President's rest-house by a walled courtyard. They also share a raised platform, which was to serve as an entrance platform for both. The guest building consists of an entrance leading to two corridors, which leads to four large units on the southern side and ten smaller ones on both the northern side and the centre. All units have their own bathroom and are separated by open courtyards.

D67.* Andrioli House

Date 1984
Location Tunis village, Fayum
Client Gerals Andrioli

Drawings Four drawings showing ground floor plan, elevations and cross sections.

Documentation

Steele, 1989. Code: 1011720

Throughout his long career, Fathy continued to create powerful mud-brick masses with domes and vaults. But, for three years between 1981 and 1884, he did not get any chance to carry out his architectural ideas. It happened that in 1984, Nawal Hassan accompanied her friend, Catalina Yanacoco, a cultural consultant in the Greek Embassy, and her husband, Gerals Andrioli, a project manager responsible for the construction of the Meridien Hotel in Heliopolis, Cairo, to visit Tunis village, a rural community in Fayum. The village is characterised by its traditional mud-brick houses which symbolise the Egyptian countryside. Andrioli and Nawal Hassan were impressed by the character of the area and decided to buy one acre of land, half an acre each, and to build two houses on it. Nawal Hassan introduced Andrioli to Fathy, and asked him to design two houses for them to be used as a weekend retreat. Fathy designed two houses related to each other and to the site and as usual, he did not take fees from his friends. Unfortunately, because of shortage of money, Nawal Hassan could not build her house, but Andrioli did. The house was constructed of mud brick produced in the site. The walls were built by labour and laymen employed from the village, except for the domes and vaults which were built by craftsmen from Aswan. Because Fathy was 84 years old, an architect working with him supervised the construction of the house.

The house consists of two parts. The first part contains the main reception area which is flanked by two spaces to be used as sitting and dinning areas. The sitting area is provided with a large fire-place. There is also a spacious kitchen which opens into an enclosed, roofless-garage. The central part of the reception area is covered by a large dome while the sitting and dinning areas were vaulted. To capture the view of the lake, the reception area occupied most of the façade and opens onto a large terrace to enjoy the cool breeze during summer. The second part consists of two spacious bedrooms and a bathroom; all of which are covered with domes. The larger bedroom also overlooks the lake through a shutter window. However the internal design of the house was determined according to both the sequences of living spaces as well their functional requirements. Dr Basil Diab, the new owner of the house, has made some changes to the house. One of the major changes was the addition of a "grand staircase" to the terrace overlooking the lake. Nawal Hassan believed that this addition "spoils the purity of the lines of the façade".

The Andrioli house has had a positive influence and revived the interest in building in mud brick in the village of Tunis. An architect, who was interested in the work of Fathy came to this area and built about five houses following the same design-principles and way of construction, as well as teaching the craftsmen the way of constructing domes and vaults.

D68. Rashad House

Date 1986
Location Tanta
Client Hassan Rashad
Drawings Four drawings showing ground floor plan, elevations and cross sections.

Documentation
Steele, 1989. Code: 1011721

D69. Talhuni House

Date 1988
Location Ghur Namrin Village, Amman, Jordan
Client Khalil Al-Talhuni
Drawings Five drawings showing ground and first floor plans, elevations and cross sections.

Documentation
Steele, 1989. Code: 1011722

D70. Tilawi Residence

Date 1989
Location Kharga Oasis
Client Governor of Kharga Oasis
Drawings Two drawings showing ground and first floor plans, elevation and cross section.

Documentation
Steele, 1997, p. 201.
Khlosi, 1997, p. 203-206.

Plans for this house are not recorded in Steele, 1989. Fathy's archive also does not include any drawings for this house but drawings are published in Khlosi, 1997.

II COMMERCIAL AND PUBLIC BUILDINGS

C1.* **Talkha Primary School,** (Now Ahmed Hassan Al-Zaiyat Secondary School)

Date 1928
Location Talkha
Client Department of Municipal Affairs
Drawings Eight drawings showing details of exterior walls, column, cornice and scroll.

Documentation

Steele, 1989. Code: 1011631
Fathy, 1973, p. 3.

The incomplete drawings of the Talkha School as well as the difficulty of verifying the actual building led other researchers to be confused and combine drawings of other buildings as illustration to the school. For example, in *The Hassan Fathy Collection: A Catalogue of Visual Documents at The Aga Khan Award for Architecture*. Bern, 1989, p. 11, James Steele included an elevation which does not relate to the actual school building. Likewise, Amal Ahmed Abdou in her Ph.D. Wohn-und Siedlungsbau anhand von Hassan Fathys Praxis und Theorie. Thesis (Doctoral) - Technische Universitat München, 1993, p. 8, based her account and the illustration of the school on those of Steele's catalogue.

This school was verified and photographed by the author in January 2000 and is illustrated below for the first time. It also corresponds with Fathy's drawings, published at www.archnet.org

C2.* **Bosphore Casino** (demolished)

Date 1932
Location Bab Al-Hadid, Cairo
Client Qudsi brothers
Drawings Two drawings showing foundation plan, elevation, cross section and details.

Documentation

Steele, 1989. Code: 1011635

The demolition of this building was verified by the author who visited the site in February 2000.

C3. **Al-Kachkachi Building** (construction unverified)

Date 1933
Location El-Dakhliya Street, Cairo
Client Mustafa Bey El-Kachkachi
Drawings Eleven drawings showing ground and typical floor plans, elevations and details.

Documentation
Steele, 1989. Code: 1011636

This building has been designated by other researchers as a commercial building. As the commercial use is restricted to the ground floor, in this catalogue it is also classified as a residential building; see D4.

C4.* **Hassanein Mausoleum**

Date 1946
Location Salah Salem Street, Cairo
Client The Government of Egypt
Drawings Three drawings showing site plan, ground floor plan and elevations.

Documentation
Steele, 1989. Code: 1011659

This mausoleum was photographed by the author in February 2000 and is illustrated below for the first time.

C5. **Ceramics Factory**

Date 1950
Location Garagus village, Qena
Client Father de Montgolfier
Drawings Two drawings showing ground floor plan and elevation.

Documentation
Steele, 1989. Code: 1011615
Fathy, 1973, p. 65.
Richards, Serageldin and Rastorfer, 1985, p. 163.

C6. **Cultural Centre** (construction unverified)

Date 1950
Location Garagos village, Qena
Client Father de Montgolfier
Drawings Four drawings showing plans, elevations and cross sections.

Documentation
Steele, 1989. Code: 1011664

C7. **Tile Factory** (construction unverified)

Date 1952
Location Jerusalem, Palestine
Client Unknown
Drawings One drawing showing ground floor plan.

Documentation
Steele, 1989. Code: 1011666

C8. **Fares Primary School**

Date 1957
Location Fares village, Upper Egypt
Client Ministry of Education
Drawings Five drawings showing plan, cross sections and axonometric drawing.

Documentation
Steele, 1989. Code: 1011
Fathy, 1973, p. 184.
Richards, Serageldin and Rastorfer, 1985, p. 163.

C9. **Idfu Primary School**

Date 1957
Location Idfu, Upper Egypt
Client Ministry of Education

Documentation
Steele, 1997, p. 194.
Richards, Serageldin and Rastorfer, 1985, p. 163.

C10. **A University for Central Algeria** (construction unverified)

Date 1960
Location Central Algeria
Client Ministry of Education, Government of Algeria

Documentation
Richards, Serageldin and Rastorfer, 1985, p. 163.

Designed during Fathy's work with Doxiades Associates.

C11. **Mosque** (construction unverified)

Date 1960
Location Punjab, Pakistan
Client Government of Pakistan
Drawings One drawing showing plan, elevation, cross sections.

Documentation

Steele, 1989. Code: 1011663
Richards, Serageldin and Rastorfer, 1985, p. 163.

In his both *An Architecture for People* (1997) and *The Hassan Fathy Collection: A Catalogue of Visual Documents* (1989), Steele documented the mosque as to be designed in 1950. In *Hassan Fathy* (1985) by Richards, Serageldin and Rastorfer, the mosque was documented as to be designed during Fathy's work with Doxiades Associates in 1960. It is likely that the mosque was designed in 1960 because it was covered by corrugated roof and a geodesic dome which Fathy experimented with for the first time while he was working in Athens. See Fathy, a Roof for Hot-Humid Zones, Doxiadis Associates, 21 December 1960. Ms., FAAUC, no. 87.

C12. **Atiya Restaurant** (construction unverified)

Date 1960
Location Unknown
Client Unknown
Drawings One drawing showing plan and elevation

Documentation

Steele, 1989. Code: 1011675

C13. **Touheimi Stables** (construction unverified)

Date 1960
Location Unknown
Client Unknown
Drawings One drawing showing plans.

Documentation

Steele, 1989. Code: 1011678

C14. **Training Centre**

Date 1962
Location Kharga Oasis
Client The Desert Development Organisation
Drawings Three drawings showing ground and first floor plans and elevations.

Documentation

Steele, 1989. Code: 1011622
Richards, Serageldin and Rastorfer, 1985, p. 163.

C15. Al-Saoura Clinic

Date 1965
Location Al-Saoura village, Kharga Oasis
Client Unknown

Documentation

Micheline Brown, A Trip to the Western Desert Oases. *Cairo Today*, v.2, no.7, 15-30 April 1981, pp. 3-6.

Pascale Ourgaut, a French architect, has been conducting a research about Fathy's clinic in Kharga Oasis in order to initiate fund-raising for its preservation. (Meeting with the author in February 2000).

C16. High Institute of Social Anthropology & Folk Art (unbuilt)

Date 1965
Location Abu Al-Rich, Aswan
Client Ministry of Culture
Drawings Twelve drawings showing plans, elevations and cross sections.

Documentation

Steele, 1989. Code: 1011679
Fathy, Conservation of Monumental Areas & the High Institute of Social Anthropology and Folk Art. A Report submitted to the Deputy Prime Minister of National Culture, 15 October 1966. Ms., FAAUC, no. 90. (in Arabic)

The site plan of this project consisted of the scientific and experimental department buildings, which also include the main entrance to the whole project, the school of music and dance, the enclosed academic museum, the Nubian open museum, the open amphitheatre and the outdoor restaurant. The most important two components of the project were the Nubian open museum and the enclosed academic museum. Fathy believed that they would highlight the remarkable historical transformation in the context of Egyptian culture for the ordinary visitor. In the open museum Fathy exhibited examples of the traditional buildings from each region in Egypt in order to show their architectural significance. The most imposing part of the museum was the Nubian wing. Fathy displayed a replica of six traditional houses of Nubia as well as the Abu Al-Riche mosque (1851) to demonstrate the concept of using mud-brick as a building material, employing the traditional methods of construction and the applicability of the traditional forms to the specific climate.

The enclosed academic museum was intended to exhibit models of the interior architectural design of many of Egypt's famous monuments in order to show the

practical application of the natural ventilation system and the traditional forms. These examples were classified into groups according to its region and period. Fathy arranged the spaces around a large central courtyard with a separate sector for administrative and facility spaces.

C17. **Social Centre** (construction unverified)

Date 1968
Location Bulaq, Cairo
Client Unknown
Drawings Six drawings showing ground and first floor plans, elevations and cross sections.

Documentation
Steele, 1989. Code: 1011684

C18. **Khoronfesh Nursery** (construction unverified)

Date 1969
Location Unknown
Client Unknown
Drawings One drawing showing plan, section and elevation.

Documentation
Steele, 1989. Code: 1011685

C19. **Abu Al-Qichr Laboratory** (construction unverified)

Date 1970
Location Unknown
Client Dr Ibrahim Abu Al-Qichr
Drawings Six drawings showing plans, elevations and cross sections.

Documentation
Steele, 1989. Code: 1011686

C20.* **Luxor Cultural Centre** (partially constructed)

Date 1970
Location Luxor
Client Ministry of Culture
Drawings Seventeen drawings showing plans, elevations and cross sections.

Documentation
Steele, 1989. Code: 1011690

Fathy, Report of the Design of Luxor City Cultural Centre: Resources of Inspiration, 3 October 1970. Ms., FAAUC, no. 207. (in Arabic)

The site is surrounded by the gardens of the Luxor and the Winter Palace hotels from the east and south. The main façade is on a north-west street which separates the centre from the Khan Al-Khalili market which overlooks the Nile. The ninth century Fatimid Sanctuary of Sidi Al-Wahche, with its mausoleum, mosque and ablution area is one of the important monuments of Luxor which lies in the site of the centre. Fathy was inspired by the architecture of the sanctuary and believed that it would be a model to define the architecture of the centre's buildings.

The cinema and theatre section which occupied the larger part of the centre consists of the enclosed theatre and the outdoor theatre. In covering the enclosed theatre, Fathy reconciled modern and traditional materials and forms. He was influenced by the vaulted storehouses of the granaries of the Ramesseum in Luxor. However, like the granaries, he employed a series of concrete arcades built on a three-metre module and covered the space between them by vaults made of burned-brick rather than mud-brick. Fathy's intention in this project was not exact imitations of Islamic architecture or the traditional forms of Nubia, but rather to adapt his architecture to contemporary needs. His reinterpretation of the traditional and medieval styles was novel when measured against those of his contemporaries. Fathy revived consistent traditional vocabularies which were essential to the attainment of architectural beauty and the expression of his profound reverence for and intuitive understanding of those historical periods which delighted him from his earliest years.

This project was photographed by the author in February 2000 and is illustrated below for the first time.

C21. **Suq Al-Silah Market** (unbuilt)

Date 1970
Location 45-66 Suq Al-Silah Street, Cairo
Client Unknown
Drawings Five drawings showing plans, elevations and cross sections.

Documentation

Steele, 1989. Code: 1011697

C22. **Mosque and Conference Centre** (construction unverified)

Date 1970
Location Khartoum, Sudan
Client Unknown
Drawings Eight drawings showing site plan, plans, elevations and cross sections.

Documentation

Steele, 1989. Code: 1011698

C23. **President Naser Mausoleum** (unbuilt)

Date 1971
Location Al-Khalifa Al-Ma'amon Street, Cairo
Client High Council of Arts and Literature
Drawings One drawing showing plan and elevation

Documentation

Steele, 1989. Code: 1011702
Fathy, Judging the President Gamal Abd El-Naser Mausoleum's Competition, 20 March 1971. Ms., FAAUC, no. 200. (in Arabic).
Fathy, Notes on 'President Gamal Abd El-Naser Mausoleum's Competition, 27 March 1971. Ms., FAAUC, no. 201. (in Arabic).

C24. **Replanning Ahmad Al-Badawi Area** (construction unverified)

Date 1973
Location Tanta
Client The High Council of Arts and Literature
Drawings Five drawings showing ground floor plan, elevations and details.

Documentation

Steele, 1989. Code: 1011699
Fathy, Re-planning Al-Sayed Al-Badawy Zone Project in Tanta, 2 February 1973. Ms., FAAUC, no. 154. (in Arabic)

C25. **Sohar Remodelling** (unbuilt)

Date 1973
Location Sohar, Sultanate of Oman
Client The Government of the Sultanate of Oman
Drawings Ten drawings showing site plan, plans, foundation plan, elevations and cross sections.

Documentation

Steele, 1989. Code: 1011704
Fathy, [Notes on Sohar Project], a Report Submitted to the Director of Centre for Economic Planning and Development, Muscat, Oman, 15 May 1973. Ms., FAAUC, no. 204.
Fathy, Research in Climate and Architecture for Development Project in Oman by Hassan Fathy and the III World Group. Submitted to the Director of Planning, Sultanate of Oman, 8 July 1973. Ms., FAAUC, no. 205.
Fathy, The Omani Village and the Projects for Rural Development, August 1973. Ms., FAAUC, no. 206.
Fathy, Choice of Site for the New Port in Sohar, Sultanate of Oman, 17 September 1973. Ms., FAAUC, no. 207.

Fathy, The Use of Folded Slabs in Village's Buildings, a Report Submitted to the General Development Organisation, Sultanate of Oman, 18 September 1973. Ms., FAAUC, no. 208. (in Arabic)
Fathy, A Note on the Design for the New Market of Sohar, 22 December 1973. Ms., FAAUC, no. 206.
Fathy, Reconstruction of Sohar City Market, Oman, 11 February 1974. Ms., FAAUC, no. 203. (in Arabic)

The market of the village was designed as a large single-storey covered building. It contained sixty commercial shops, bakery, café and a department store. Fathy based his design on a 3.3 meter grid. It was roofed with a baratsi truss which proved to be an inexpensive, lightweight roofing element and structurally stable.

C26. Islamic Centre (unbuilt)

Date 1974
Location Tripoli, Lebanon
Client Government of Lebanon
Drawings One drawing showing ground floor plan

Documentation

Steele, 1989. Code: 1011700
Fathy, Building an Islamic Complex in Tripoli City, a Report Submitted to Rashid Kramy, President of Lebanon, 17 December 1974. Ms., FAAUC, no. 152. (in Arabic)

C27.* Al-Wehda Mosque and Islamic Centre

Date 1974
Location Abbasia, Cairo
Client Municipality of Cairo
Drawings Ten drawings showing site plan, ground floor plan, elevations and cross sections.

Documentation

Steele, 1989. Code: 1011705
Fathy, Design of Al-Wehda Mosque and the Islamic Centre, Abbasia, a Report Submitted to the Mayor of Cairo, 10 July 1974. Ms., FAAUC, no. 185. (in Arabic)

In 1974 the Municipality of Cairo commissioned Fathy to build a mosque and Islamic centre in Abbasia, a suburb of Cairo with a high population density. The project was not an easy task for Fathy because he was confronted by three essential constraints that he needed to accommodate in his design. First, the site of the project lies on a street with a very high traffic density, a situation which led many architects to oppose the idea of building a mosque in this area. Fathy argued that their point of view was right, because they follow the mainstream of designing mosques which are entirely open into the

street, but they missed the essential point that Islamic rituals should be practised in isolation from the noisy street and thus required a solution which was appropriate to the specific site. Second, the site was next to the Ahmed Maher mausoleum which was built in Moroccan style. However reconciliation between the style of the mausoleum and the suggested Egyptian style of the mosque was essential. Finally, the site was close to Dar Al-Sheffa Hospital and this also necessitated the consideration of quietness and a cheerful façade facing the hospital.

Fathy developed his designs in response to these substantial requirements. The plan of the Islamic centre consists of the main entrance which leads into the prayer *iwans*, a garden- courtyard surrounded by arcades on two sides, a secondary entrance leading to the management rooms and a lecture hall, ablution room for men and another for women with separate entrance. In addition, he was inspired by the podium of the mausoleum which rose three meters high above the street. Fathy raised the whole mosque project on a podium of the same level. To achieve unity between the Islamic centre and the mausoleum Fathy extended the podium to include the rest of the site, so that both buildings appear as if they were one project. Fathy achieved quietness to the adjacent hospital by building the façade facing it with double walls.

As usual in Fathy's work, the Islamic centre underwent some alterations and omissions including the minaret and the extended podium. Despite these alterations, the facades of the centre as a whole, still exhibit a magnificent contrast of horizontal and vertical elements.

This mosque was photographed by the author in January 2000 and is illustrated below for the first time.

C28. **Al-Mashrabiya Tourist Centre** (unbuilt)

Date 1976
Location Maryoutia Road, Giza
Client Shukri brothers
Drawings Six drawings showing site plan, ground and first floor plans, elevations and cross sections.

Documentation

Steele, 1989. Code: 1011708
Richards, Serageldin and Rastorfer, 1985, p. 166.

C29. **Rebat Hotel** (construction unverified)

Date 1978
Location Kharga Oasis
Client Unknown
Drawings One drawing showing ground floor plan, unit plan, elevation and cross section.

Documentation
Steele, 1989. Code: 1011711
Richards, Serageldin and Rastorfer, 1985, p. 167.

C30. Roxbury Mosque (construction unverified)

Date 1980
Location Boston, USA
Client The Muslim community of Boston
Drawings Two drawings showing plan, elevation and cross sections.

Documentation
Steele, 1989. Code: 1011717

C31. Siwa Children's Hospital

Date 1989
Location Siwa Oasis
Client Municipal of Siwa

Documentation
Steele, 1997, p. 201.

III VILLAGES AND FARMS

V1.* Royal Society of Agriculture Farm (demolished)

Date 1941
Location Bahtim
Client The Royal Society of Agriculture
Drawings One drawing showing plan and elevation

Documentation
Fathy, 1973, pp. 5-6.
Richards, Serageldin and Rastorfer, 1985, p. 161.

The plan consisted of three separate blocks, all arranged along a boundary wall and served with one main gate. These blocks were to serve different functions; residential building, a stable for cattle and granaries and a pigeon-cote. Fathy located the cattle block in the rear of the site in order to provide the cattle with more space as well as to give more privacy to the housing. While the housing block and the stable were designed with flat roofs, the granaries were higher than them in order to provide adequate natural

ventilation and roofed with the vaults and domes, which dominated the façade of the complex. Two obelisk-like columns flanking the main gate as well as the facade demonstrated Fathy's interest in the visual tensions of ancient Egypt architecture.

In an interview with the author in January 2000, Mahmoud Fouraig (b.1937), one of the residents of the Royal Society Farm, confirmed that all the buildings of the farm were demolished, except some parts of the granaries, which are used as residential spaces by him and others.

V2. **Izbit El-Basri Village** (demolished)

Date 1942
Location Cairo
Client The Egyptian Red Crescent
Drawings One drawing showing, site plan, plan, foundation plan, elevations and cross section.

Documentation

Fathy, 1973, pp. 12-14.
Richards, Serageldin and Rastorfer, 1985, p. 161.
Steele, 1997, p. 190.

Only one prototype-house was built and then demolished.

V3.* **New Gourna Village**

Date 1945-1948
Location West Luxor, Upper Egypt
Client Department of Antiquities
Drawings Thirty eight drawings showing village site plan, neighbourhood plan, public buildings plans.

Documentation

Steele, 1989. Code: 1011614
Villiers Bergne, Modern Village with Tradition. *Parade*, 1 March 1947, pp. 8-9.
Tradition Égyptienne. *Plaisir de France*, no.155, November 1950, p.33. (in French)
Een Modderdorp Aan De Nijl. *Katholieke Illustratie*, no.52, 29 December 1950, pp. 2072-2073. (in German)
Mohammed A. Maher, [New Gourna Village]. *Al-Tahrier*, no.93, 25 January 1955, pp. 13-16. (in Arabic)
Fathy, Schools of New Gourna Village, 1 June 1955. Ms., FAAUC, no. 16. (in Arabic)
Fathy, Benefiting from Gourna Village Experiment in Other Future Village Projects, a Memorandum Submitted to the Scientific Research Committee, 18 January 1960. Ms., FAAUC, no. 98. (in Arabic)
J. M. Richards, Gourna: a Lesson in Basic Architecture. *The Architectural Review*, v.147, February 1970, pp. 109-118.

Gourna: A Tale of Two Villages. *Prism*, v.ii, no.4,5, 1970, pp. 30-44.
Fathy, *Architecture for the Poor: An Experiment in Rural Egypt*. Chicago, 1973.
Ali Moustaader, Gourna: The Dream Continued. *Mimar: Architecture in Development*, no. 16, April - June 1985, pp. 54-59.
The New Gourna: Luxor, 1948-1953. *Casabella*, no. 653, February 1998, pp. 66-68.

The early history of New Gourna is discussed in chapter two. Its subsequent fate, is, however, worth recording because of the significance of the village in Fathy's career as a whole. In January 1961, Fathy visited Gourna, which was exactly as he left it in 1948. Overlooking the village Fathy found the theatre was deserted, the khan and the crafts school were empty and a few houses were inhabited by squatters. The Ministry of Antiquities did nothing and the Gournis continued to live on the hill and continued robbing the tombs. Fathy discovered that only two things had flourished; the tree he planted, now grown thick and strong and the forty-six masons he trained, who were working in the region, using the skills they learned at Gourna and proving the value of training local craftsmen.

The problem of relocating the inhabitants of Gourna, has not been resolved yet and the conflict between cultural preservation and archaeological protection is escalating rapidly. In January 1998, Selmi Selim, Head of the Luxor City Council, issued 16 demolition orders in old Gourna to protect the archaeological site near Hatshepsut's Temple. When the police attempted to help carrying out the decision, they were met with violent resistance, which left four people dead and twenty-nine injured. This incident indicates the extent of Selim's misunderstanding of the phenomenon of the Gournis' existence and the importance of their own place. Obviously, the consequences of this violence were not considered and it is reminiscent of what Fathy did in a similar situation more than fifty years ago. It happened, when the Gournis flooded New Gourna village and the Palace decided to help Fathy by sending him a detachment of Sudanese guards, very tough troops who carried big whips. Fathy was "horrified at the proposal" and rejected it. He believed that "it would not solve the mystery and would certainly inspire so much hatred that the peasants would never be won over to the new village".

The Ministry of Planning has chosen a new location, one kilometre from old Gourna, to resettle the Gournis in a new village with an estimated cost of LE100 million. Selim believes that the project will be a "tremendous leap forward for the people". Although the City Council promised the Gournis that the new houses will be the same as their old ones, the Gournis still believe that their culture and traditions will be destroyed by the resettlement. Selim argues that Egypt's heritage must be preserved and that one "can't afford to have this heritage wasted because of informal houses being built in an uncivilised manner... on important historical areas". Abd El-Malak, who lives in Gourna believes that their houses "are not slums. Our houses are spacious, and built in the distinctive Al-Gourna style. We don't want telephone lines and shopping malls, we just want to preserve our way of life on our land". Selim's main aim was to modernise Gourna, but he has missed the cultural, social and psychological factors that govern the way of life of the inhabitants; considerations that Fathy did not ignore when he designed his New Gourna village. (Mariz Tadros, A House on the Hill. *Al-Ahram*, 2-8 April 1998, p. 15)

Inspection by the author in February 2000 shows that New Gourna village has now been spoiled by intensive development. The *khan* and the crafts school are used as offices by the Agricultural Association. Thirteen out of the eighty houses of the village, which are now inhabited by squatters, were demolished and concrete houses built instead. The Boys and Girls schools are demolished and replaced by standardised State concrete schools. Fathy's field house is in a very poor condition and it is under the custody of Adel Abd El-Hamid, son of Fathy's niece. The amphitheatre is demolished but the covered theatre is conserved by the Ministry of Culture. The market-place is in a very poor condition and many of its structures are demolished. It is now used as a garage and storage for the equipment of the Agricultural Association. The Mosque is the only building in the village in a good condition, because the villagers are concerned to keep it clean and tidy for their prayers.

What does the future hold for New Gourna village and what is its message for the contemporary architect of the beginning of the twentieth first century? Although most of its buildings are vulnerable to many social and climatic factors which destroy its visual unity, it is still delightful and inspiring, because of its set of hidden design and planning principles.

V4.* **Lulu'at Al-Sahara Village**

Date 1950
Location Al-Mansoriya
Client Hafez Afifi Pasha
Drawings Eight drawings showing plans, elevations and cross section.

Documentation

Steele, 1989. Code: 1011616
Richards, Serageldin and Rastorfer, 1985, p. 162.

Inspection by the author in February 2000 shows that Fathy's houses are still inhabited and the mosque is in a good condition and still in use. Only the school is inactive because of the building of many other state schools.

V5. **Mit Al-Nasara Village** (unbuilt)

Date 1954
Location Unknown
Client The Ministry of Social Affairs

Documentation

Fathy, Re-housing Mit Al-Nasara Village, a Report Submitted to the Ministry of Social Affairs, c.1954. Ms., FAAUC, no. 7. (in Arabic)

V6. **Regional Plan for the Development of Greater Mussayib**
(construction unverified)

Date 1958
Location Greater Mussayib, Iraq
Client Ministry of Development
Drawings Fourteen drawings showing site plan, plans, elevations and cross sections.

Documentation

Steele, 1989. Code: 1011672
Fathy, A Proposed Training Course for Masonry Work in Rural Areas, Doxiadis Associates, 26 September 1957. Ms., FAAUC, no. 34.
Fathy, Applications of Ideas on Thermal Comfort, Doxiadis Associates, 2 May 1958. Ms., FAAUC, no. 10.
Fathy, Comments on the Draft Dox: The Regional Plan for the Ekistic Development of Greater Mussayib, Doxiadis Associates, 24 June 1958. Ms., FAAUC, no. 35.
Fathy, Greater Mussayib Project - Note on the Health Centres, Doxiadis Associates, 7 July 1958. Ms., FAAUC, no. 33.
Fathy, Plans for Village in Mussayib, Doxiadis Associates, 21 July 1958. Ms., FAAUC, no. 32.
Fathy, Note on Rural Housing in Industrially Undeveloped Countries, Doxiadis Associates, 6 September 1958. Ms., FAAUC, no. 31.

V7. **Harraniya Village** (unbuilt)

Date 1964
Location Giza
Client Ministry of Scientific Research
Drawings Three drawings showing site plans.

Documentation

Steele, 1989. Code: 1011648
Fathy, Corrugated Roof. Report Submitted to the Ministry of Foreign Affairs, 17 April 1961. Ms., FAAUC, no. 66. (in Arabic)
Fathy, Harraniya Village Project, A Letter Submitted to the Ministry of Scientific Research, 5 May 1964. Ms., FAAUC, no. 114. (in Arabic)

According to the above Ms., FAAUC, no. 114, the Harraniya Village Project was a collaboration between Fathy and the Ministry of Scientific Research (MSR) in 1964. Because the literature of the Harraniya village was written in Arabic, other researchers, such as James Steele, were both confused and misled. While in his *The Hassan Fathy Collection*, 1989, pp. 22, 25, Steel assumed that the project was a collaboration between Fathy, Wissa Wassef and the MSR in 1940, in his *An Architecture for People*, 1997, pp. 112-113, 194, Steele proposed that this project was designed in 1957 for his friend Wissa Wassif as an extention to his Harraniya Weaving Village of 1952. Likewise, Amal Ahmed Abdou in her Ph.D. Wohn-und Siedlungsbau anhand von Hassan Fathys

Praxis und Theorie. Thesis (Doctoral) - Technische Universitat München, 1993, p. 14, based her account of the Harraniya village on that of Steele's catalogue.

V8. **New Bariz Village** (partially constructed)

Date 1964
Location Kharga Oasis
Client The Desert Development Organisation
Drawings Thirty seven drawings showing site plan of the village centre, market's plans, elevations and cross sections, neighbourhood unit plan, farmers and non-farmers units plans and public buildings plans.

Documentation

Steele, 1989. Code:1011623
Fathy, Research on the Villages of the Oasis and Deserts of the New Valley, 11 April 1964. Ms., FAAUC, no. 117. (in Arabic)
Fathy, Bariz: A Case Study in Rural Housing (New Vally - Kharga Oasis). A Paper Submitted in Rural Habitat in the Arab Countries Symposium, 6 - 11 November 1977. Ms., FAAUC, no. 159.
New Bariz: Oasi di Kharga, 1967. *Casabella*, no. 653, February 1998, pp. 69-72.

Before planning the new village, Fathy carefully studied the long-established towns in the valley of the western oasis. Fathy was influenced by the mud-brick ruins of the fourth century AD necropolis of Bagawat near the village of old Kharga. It was built by the Coptics, who ran away from the cruelty of the Romans to live in this remote region. Fathy argued that these ruins are a strong testimony of a knowledgeable society and represent useful lessons structurally, economically and socially. He also believed that "this is the time to take advantage of the work of those pioneers, whose buildings survived for fourteen centuries". Fathy was impressed and influenced by the construction method of the roofs in Bagawat, where a combination of domes and vaults work together rather than individually to cover large spaces. He used this construction system for roofing the buildings of New Bariz.

In addition to investigating the necropolis of Bagawat, Fathy also examined the existing village of old Kharga. He noted that the people responded to the harsh desert climate by building their homes close together and opening to inner courtyards. In this way a pattern of shaded narrow streets was established in order to counterbalance the summer temperature, which was as high as 50 degrees centigrade. In some towns, such as Balat, houses actually spanned the streets with their mud brick and palm wood structure. Fathy integrated these traditional patterns and building techniques into his design. In response to the climatic constraints, he also incorporated other formal features in his buildings such as, roof terraces, shaded arcades and domestic wind-catchers.

One of the most important buildings of the New Bariz village is the market place, which represents the heart of community activity. The spaces are organised around a central courtyard with the shops situated on one side and the stores on the other one facing it; both sides face the prevailing wind. The shops are arranged on two sides of a wide internal corridor and covered with vaults on two levels. The fronts of the shops facing

the central courtyard are provided with a vaulted loggia in order to cast shade. The stores are also vaulted and situated on the ground level and a basement under the grade level.

In order to overcome the problem of keeping the stored perishable vegetables, fruits and grains at low temperature, Fathy depended, on the one hand, on the thermal mass of the material used, which ensured an efficient insulation from the heat. On the other, he manipulated the circulation of the natural air movement through the stores by using wind towers, which represent one of the most distinctive features of the village. These wind towers, which are spectacular in form and sophisticated in function, were determined by environmental engineering, though it uses a scientific principle combined with the forces of nature, a technique which was unfamiliar to the Kharga Oasis. This technique has a twin system of wind shafts; a wind-catch to bring the air into the ground floor and then funnelled down into the basement levels and a secondary shaft to accelerate the circulation. This system of ventilation reduced the temperature by up to 15 degrees centigrade. In fact, the market place is the ultimate achievement of Fathy's experiments with natural ventilation.

V9. **New Gourna Tourist Village** (unbuilt)

Date 1970
Location Luxor
Client Ministry of Tourism
Drawings Sixteen drawings showing site plan, neighbourhood plan, units plans, buildings plans, elevations and cross sections.

Documentation

Steele, 1989. Code: 1011691
Fathy, Transformation of New Gourna Village to a Tourist Village, a Report Submitted to the Minister of Tourism, 1970. Ms., FAAUC, no. 211. (in Arabic)

V10. **Al-Sadat Village** (unbuilt)

Date 1976-1978
Location Aswan
Client Ministry of Housing

Documentation

Sadat Village: A Prototype Project for Building the Rural Areas. *Al-Messa*, 10 January 1976, p.6. (in Arabic)
Fathy, Construction of Al-Sadat Village, Aswan, a Report Submitted to the Minister of Housing and Construction, 16 March 1978. Ms., FAAUC, no. 194.
Fathy, A Proposal of Collaboration Between the International Institute for Appropriate Technology, Cairo and the Department of Architecture, University of California, Berkley, 1978. Ms., FAAUC.

This project has never been mentioned before in all previous studies.

V11. Nile Festival Village (unbuilt)

Date 1977-1982
Location Tarh El-Bahr Island, Luxor
Client The Nile Village Company and the Nile Festival Foundation
Drawings Fifteen drawings showing site plan and tourist units plans

Documentation

Steele, 1989. Code: 1011709
Fathy, The Nile Festival Village Development Study by the Nile Village Company, Ltd with the assistance of the Overseas Private Investment Corporation, September 1982. Ms., FAAUC, no. 233.

The site plan of the Nile festival village consisted of guest accommodation, public areas, recreational facilities, assembly and performance facilities and management and operating facilities. The site of the project is bounded on two sides by the River Nile. The main arrival quay is situated on the east side to provide the main entrance to the village. Along the east-west axis, Fathy situated the main village square, the open-air theatre, the crafts khan, the restaurant and café, the music chamber, the Turkish bath, the swimming pool, the bank and the management facilities.

The guest units are organised in pairs and grouped around narrow pedestrian streets in order to provide shade and a feeling of intimacy similar to that of the vernacular villages. The guest rooms included 425 rooms, divided into four types. Type A is a spacious single unit. Types B and C are, respectively, one-storey and two-storey units, designed so that they may be used in combination or as individual guest units. Type D, which Fathy called the *khan* (lodging place), similar to that of the Al-Ghorie *khan* in the twelfth century in Cairo, includes several duplex types of varying sizes. All these different units include a domed entry, a domed living room, a dressing room and a bath. The majority of the units, other than those of the *khan*, include a private courtyard with plants and a fountain as well as a loggia for outdoor relaxation. The rooms are also provided with all the modern facilities required for the comfort of visitors, including air conditioning units. This is a rare example by Fathy employing mechanical air conditioning. Given Fathy's preference for natural ventilation, it seems likely that this was included on the insistence of the client.

The public areas are a variety of indoor and outdoor spaces appropriate to the resort's character. There is a central restaurant, two covered streets with shops and boutiques on both sides for selling local products and other guests' needs. In addition, Fathy included a gallery for displaying and selling the works of local artists and craftsmen as well as display and reference facilities which would provide guests with information about the cultural heritage of the Luxor area. The recreational facilities included tennis courts in the south of the village, while two swimming pools, children's pool and the Turkish bath were positioned around the main square. For entertaining visitors, Fathy included several performance spaces to be used for major events, film screenings or presentations about the history of Egypt.

V12. **Wadi Zarga Village** (construction unverified)

Date 1978
Location Wadi Zarga Village, Tunisia
Client Unknown
Drawings Three drawings showing village centre plan, plans, elevations and cross sections.

Documentation

Steele, 1989. Code: 1011713

V13. **Dar Al-Islam Village** (partially constructed)

Date 1980
Location Abiquiu, New Mexico, USA
Client Dar Al-Islam Foundation
Drawings Twelve drawings showing site plan, plans, foundation plan, elevations, cross sections and a mosque axonometric.

Documentation

Steele, 1989. Code: 1011628

Simone Swan, Hassan Fathy Demonstrates Ancient Construction Methods in New Mexico. *Architectural Record*, v. 168, December 1980, p. 39.

Nuridin Durkee, Islamic Village in New Mexico. *Al-Magal*, no.129, December 1981, pp.22-25. (in Arabic)

Abdullah Schleifer, Hassan Fathy: A Voyage to New Mexico. *Arts & The Islamic World*, v.1, no.1, Winter 1982 / 1983, pp.30-35.

David Dillon, A Mosque for Abiquiu. *Progressive Architecture*, June 1983, pp.90-92.

Abdullah Schleifer, Hassan Fathy's Abiquiu: An Experimental Islamic Educational Centre in Rural New Mexico. *Ekistics*, v. 304, January / February 1984, pp. 56-60.

Nuridin Durkee, Dar Al-Islam: New Mexico. *Mimar: Architecture in Development*, no.24, June 1987, pp.11-18.

The basic requirements of the community of Dar Al-Islam were determined even before nominating an architect for the project. The complex was intended to include religious and educational institutions such as a mosque, *madrassa* (school of theology) and a *riwaqu* (covered area for students and teachers). It was also intended to involve an administrative centre consisting of an institute of advanced Islamic studies, houses, shops, a women's centre, library and clinic. The master plan of Dar Al-Islam had been revised many times for some unresolved reasons. El-Wakil was responsible for one of them and another one to other disciples of Fathy. With the help of the two Nubian masons, the participating community members and fifty women and men came from Arizona, Colorado, Massachusetts, Mexico, Texas and New York completed the construction of the mosque in a record time of two weeks.

The design of the mosque is simple and characterised by its repeated single-domed cells as well as the use of Nubian architectural forms. Fathy roofed the mosque with six Byzantine domes, one larger Sassanid dome that dominates the facade and is built over the main prayer area, and two barrel vaults. The larger dome sites on an octagonal base which is created by four squinches in the corners. The large dome is also decorated by locally made lanterns suspended from it. The vaults are flanked by two scuppers to direct the heavy seasonal rain water away from the concrete coated walls. The openings of the mosque and the school have pointed arches and are filled in with claustrawork. The structure and scale of the mosque reflects all Fathy's hall-marks, except the unfamiliar concrete surface to the walls which give the building a plastic appearance. The simplicity of the plan is clear from the elevations. Hierarchy of space and function from west to east is expressed externally in elevation and both the south and west elevations are particularly coherent.

Despite the success of building the vault and the dome of the mosque, the American masons were unable to follow the demonstrations of the Nubian instructors. As a result, they began to substitute in place of the parabolic curves, which the Nubian masons used, expensive plywood form-work to create all arches and springing lines of vaults. Unfortunately, small details were misused during the demonstration which caused unexpected effects on the construction progress. On the one hand, marks which have always been necessary for the correspondence of one brick course to the next in vaults and domes, were eliminated with undesirable results. On the other, changes in the contents of the mud-brick in order to cope with thermal expansion were made to counterbalance the poor adhesion of the local soil.

The result of these breakdowns seems to have created a distrust of the traditional construction system presented by Fathy. A system which have been successfully used in many major projects in Egypt failed to achieve its intended outcome and seemed to be irrelevant to the American builders. Today this distrust is evident in many positions, including the laminated plywood that was used to support the long barrel vaults, the steel reinforcing bars that support the adobe walls, concrete slabs, lintel beams and corner columns. Fired clay bricks can also be traced in the un-coated domes of the arts and crafts centre and provide a strong testimony to the builder's distrust of mud-bricks. The misunderstanding of Fathy's system created an obvious distrust of his main intentions leading to structural compromises initiated by the decision makers at Dar Al-Islam.

V14.* **Journalists' Resort Village**

Date 1989
Location North Coast, Mediterranean Sea, 30 kilometres west of Alexandria
Client The Journalists' Association
Drawings site plan, unit plans, elevations and cross sections.

Documentation

Architect Hassan Fathy Signs the Design of the Journalists' Village. *Al-Ahram*, 21 November 1989, p. 12. (in Arabic)
[Journalists' Village]. *Al-Akhbar*, 21 November 1989, p. 12. (in Arabic)

Hassan Fathy's Village for Journalists in the North-West Coast. *Alam Albena*, no. 162, January 1995, pp. 26-27. (in Arabic).
Mohamed Maged Khlosi, *Hassan Fathy*. Beirut, 1997, pp. 167-176. (in Arabic)

Plans for this project are not recorded in Steele, 1989. Fathy's archive also does not include any drawings for this project but drawings are published in *Alam Albena*, no. 162, January 1995 and Khlosi, 1997.

The site of the project is bounded on two sides by the highway of Alexandria-Matrouh to the south and the Mediterranean Sea to the north. The village consisted of 337 residential units divided into four types, a social club including cinema, restaurant and sitting room, a market, an ambulance-service, a fire-service, a management building, a mosque, recreational areas which include various sports courts and a garden for the children and a swimming pool. Fathy's planning concept was to achieve a complete separation between pedestrian and traffic movements for the safety of the residents. He left a safety zone alongside the main highway and situated a secondary road parallel to it. This road leads into two main eighteen-metre wide streets for cars, which run the whole length of the site on both the east and west sides. The main pedestrian street is twelve metres wide and is situated in the middle of the village. It also runs the length of the whole site, ending at the swimming pool and the recreational area on the beach.

In designing the layout Fathy tried to retain the natural topography of the site while also exploiting it so as to take advantage of the magnificent view of the sea and the prevailing north-west wind. However, he divided the site into equal quarters, each on a different level according to the hierarchy of the slope of the land and parallel to the sea. The residential quarters are separated by ten-metre wide car streets, which end at the main pedestrian street, each with its own cul-de-sac. They are intended to lead to the garages in the back of each unit. The residential blocks are organised in pairs and grouped around six-metre wide pedestrian streets which provide shade and a feeling of intimacy. They are proposed to lead to the main pedestrian street as well as giving access to the main entrances of the units.

The quarters are divided into equal sections, each 283 square metres. Each unit is built on 96 square metres and the rest of the section is left for a courtyard in the back of the unit with a private garden in front of it. The spaces of each unit are arranged on two floors. The ground floor consists of the main entrance, the reception area, the kitchen, the bathroom, the courtyard and the garage. From the ground floor, a staircase leads up to the first floor which contains two bedrooms, a bathroom and a terrace overlooking the sea. As in all his previous work, Fathy applied the principles of the Arab-Islamic house. The double-height central part of the reception area is domed and flanked by three vaulted sitting areas on different level. Each bedroom is divided into two spaces; a domed dressing area and a vaulted sleeping area on a different level. The kitchen and the bathroom are covered either with domes or vaults. Like New Gourna (V3), Fathy also applied his usual vocabulary in designing the mosque and the public buildings. The whole village is built of dressed-stone quarried locally.

The public gardens are designed following the principles of the Arabic garden like that of the Alhambra palace in Granada. Each garden is stepped, following the natural slope of the land and provided with palm-trees, trees, flowers and fountains. As we move into

and through the village, we get the impression of its overall aesthetic. There are also many distinctive details that can be traced in the vistas and public spaces.

LIST OF ILLUSTRATIONS

Unless otherwise indicated, all works and drawings are by Hassan Fathy.

1. Ahmed Fathy, Fathy's father. (courtesy of Souad Hamdi, Fathy's niece)
2. Del Bassand, Fathy's mother. (courtesy of Souad Hamdi)
3. Fathy, his wife, brothers, sisters and relatives. (courtesy of Souad Hamdi)
4. Khediveya High School, Cairo. (Author, 2000)
5. Talkha Primary School, Talkha, 1928. (Author, 2000)
6. Talkha Primary School, portico with Doric columns. (Author, 2000)
7. Talkha Primary School, classical details. (Author, 2000)
8. Hosni Omar Villa, Giza, 1930, elevation. (Archnet website. www.archnet.org)
9. La Giardiniera Kiosk, Bulaq, Cairo, 1930, elevation. (Steele, 1989)
10. Bosphore Casino, Bab Al-Hadid, Cairo, 1932, elevation. (Steele, 1989)
11. Garvice House, Cairo, 1937, elevation. (Archnet website)
12. Al-Emari Villa, Sidmant Al-Gabal, Fayum, 1937, elevation. (FAAUC)
13. Gouache from the Mansoura Exhibition, Mansoura, 1937. (Steele, 1997)
14. Al-Hariri Villa, Giza, 1938, elevation. (Archnet website)
15. Mohammed Fathy Villa, Kom Al-Akhdar, 1938, elevation. (Archnet website)
16. Hishmat Villa, Dokki, Cairo, 1938, elevation. (Steele, 1989)
17. Al-Razik Villa, Abu-Girg, 1941, elevation (gouache). (Richards, Serageldin & Rastorfer, 1985)
18. Royal Society of Agriculture Farm, Bahtim, 1941. (Fathy, 1973)
19. Royal Society of Agriculture Farm, plan. (Steele, 1997)
20. Village of Dahmit, Nubia, doorway with claustra-work. (Fathy, 1973)
21. Fatimid Cemetery, Aswan, 10th century. (Fathy, 1973)
22. Monastery of St. Simeon, Aswan, 10th century. (Fathy, 1973)
23. Granary of the Ramesseum, Luxor, 19th dynasty. (Fathy, 1973)
24. Vault supporting staircase, Touna Al-Gabal, Ptolemaic period. (Fathy, 1973)
25. Said House, Marg, 1942. (Archnet website)
26. Said House, plan and cross section. (Steele, 1997)
27. Said House, courtyard. (Archnet website)
28. Said House, view in 2000. (Author)

29. Said House, view in 2000. (Author)
30. Ezbet El-Basri model-house, Ma'adi, Cairo, 1942. (Fathy, 1973)
31. Ezbet El-Basri, Cairo, 1942, row of concrete houses, by the Egyptian Red Crescent's architect. (Fathy, 1973)
32. Chilean Nitrate Company Resthouse, Safaga, 1942, plan. (Steele, 1989)
33. Chilean Nitrate Company Resthouse, elevation. (Steele, 1997)
34. Al-Nasr House, Fayum, 1945. (Author)
35. Al-Nasr House, plan. (Steele, 1997)
36. Al-Nasr House, *malqaf* / stairwell. (Author)
37. Kallini House, Samalut, El-Menia, 1945, plan. (Archnet website)
38. Kallini House, elevation. (Archnet website)
39. Kallini House, cross section. (Archnet website)
40. Old Gourna Village, Luxor. (Author)
41. New Gourna Village, Luxor, (1945-1948), master plan. (Richards, Serageldin & Rastorfer, 1985)
42. New Gourna Village, test design with plants and animals. (Fathy, 1973)
43. New Gourna Village, housing in 1948. (Fathy, 1973)
44. New Gourna Village, housing in 2000. (Author)
45. New Gourna Village, Fathy's house. (Author)
46. New Gourna Village, street to the main square. (Archnet website)
47. New Gourna Village, mosque. (Author)
48. New Gourna Village, *madyafa* (gallery) attached to the mosque. (Archnet website)
49. New Gourna Village, theatre. (Author)
50. New Gourna Village, marketplace in 1948. (Fathy, 1973)
51. New Gourna Village, marketplace in 2000. (Author)
52. New Gourna Village, exhibition hall. (Fathy, 1973)
53. New Gourna Village, *khan*. (Fathy, 1973)
54. New Gourna Village, crafts school. (Fathy, 1973)
55. New Gourna Village, boy's primary school. (Fathy, 1973)
56. New Gourna Village, courtyard of girls' primary school. (Fathy, 1973)
57. New Gourna Village, pigeon tower. (Fathy, 1973)
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59. New Gourna Village, water point. (Fathy, 1973)
60. Hassanein mausoleum, Salah Salem Street, Cairo, 1946. (Author)
61. Abu-Gabal House, Giza, 1947. (courtesy of Tusun Abu-Gabal)
62. Abu-Gabal House, ground floor plan. (Archnet website)
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64. Abu-Gabal House, interior of the reception area. (Author)
65. Hassanein Villa, Maadi, Cairo, 1949, elevation. (Archnet website)
66. Hassanein Villa, plan. (Archnet website)
67. Ceramic Factory, Garagus, Qena, 1950. (Archnet website)
68. Ceramic Factory, plan and elevation. (Steele, 1989)
69. Stopplaere House, Luxor, 1950. (Author)
70. Stopplaere House, plan. (Steele, 1997)
71. Monastirli House, Giza, 1950. (Archnet website)
72. Monastirli House, plan. (Steele, 1997)
73. Monastirli House, cross section. (Archnet website)
74. Monastirli House, pergola. (Archnet website)
75. Taşlik Coffee House, Istanbul, (1947-1948), by Sedad Hakki Eldem. (Bozdogan, Özkan and Yenal, 1987)
76. Lulu'at Al-Sahara Village, Al-Monsoriya, 1950, housing. (Archnet website)
77. Lulu'at Al-Sahara Village, plan. (Richards, Serageldin & Rastorfer, 1985)
78. Lulu'at Al-Sahara Village, mosque. (Author)
79. Lulu'at Al-Sahara Village, school courtyard. (Author)
80. Wassef Weaving Centre, Harraniya, Giza, 1952, by Ramses Wissa Wassef. (Author)
81. Fares Primary School, Fares village, Upper Egypt, 1957. (Steele, 1997)
82. Fares Primary School, plan. (Richards, Serageldin & Rastorfer, 1985)
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84. Iraq Housing Programme, Greater Mussayib, Iraq, 1958, site plan. (Steele, 1997)
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88. Pakistan Mosque, Punjab, Pakistan, 1960, plan and elevations. (FAAUC)

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90. Carr House, Athens, Greece, 1962, plan. (Steele, 1997)
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92. Ali Fathy Apartment, (unknown location), 1960, plan. (Steele, 1989)
93. Ambassador Villa, Niamey, Nigeria, 1960, plan. (Steele, 1997)
94. Hassan Fathy House, 18th century Mamluk house, Cairo. (Author)
95. Hassan Fathy House, living room. (FAAUC)
96. New Valley Training Centre, Kharga Oasis, 1962. (Archnet website)
97. New Bariz Village, Kharga Oasis, (1964-1967), layout of town centre. (Ms., FAAUC, no. 159)
98. New Bariz Village, farmer block plan. (FAAUC)
99. New Bariz Village, non-farmer neighbourhood's plan and elevation. (Fathy, 1986)
100. New Bariz Village, market. (Archnet website)
101. New Bariz Village, market courtyard. (Richards, Serageldin & Rastorfer, 1985)
102. New Bariz Village, market's plan and cross section. (Steele, 1997)
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104. High Institute of Social Anthropology and Folk Art, Abu Al-Rich, Aswan, 1965, master's plan and elevation. (FAAUC)
105. High Institute of Social Anthropology and Folk Art, museum plan. (FAAUC)
106. High Institute of Social Anthropology and Folk Art, museum cross section. (AAAUC)
107. Harraniya Village, Giza, 1964, master plan. (Steele, 1989)
108. Al-Dariya Housing, Al-Dariya, Saudi Arabia, 1966, unit plan. (FAAUC)
109. Al-Dariya Housing, cross section. (FAAUC)
110. Riad House, Shabramant, Giza, 1967. (Richards, Serageldin & Rastorfer, 1985)
111. Riad House, plan. (Richards, Serageldin & Rastorfer, 1985)
112. Mehrez Apartment, Cairo, 1967, plan, showing apartment only. (Abdou, 1993)
113. Mehrez Apartment, living area. (Archnet website)
114. Luxor Cultural Centre, Luxor, 1970. (Author)
115. Luxor Cultural Centre, plan. (FAAUC)
116. Mosque and Conference Centre, Khartoum, Sudan, 1970, elevation. (Archnet website)

117. Sadruddin Aga Khan House, Aswan, 1970, plan. (Richards, Serageldin & Rastorfer, 1985)
118. Sadruddin Aga Khan House, elevation. (Richards, Serageldin & Rastorfer, 1985)
119. President Naser Mausoleum, Cairo, 1971, elevation. (Archnet website)
120. Hassan Fathy House, Sidi Krier, North Coast, 1971. (Author)
121. Hassan Fathy House, plan. (Fathy, 1986)
122. Sohar Remodelling, Sohar, Sultanate of Oman, 1973, market plan. (Richards, Serageldin & Rastorfer, 1985)
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125. Al-Wehda Mosque and Islamic Centre, Abbasia, Cairo, 1974. (Author)
126. Al-Wehda Mosque and Islamic Centre, cross section. (Steele, 1989)
127. V.I.P. House, Tabuk, Saudi Arabia, 1974, plan. (Steele, 1989)
128. V.I.P. House, elevation. (Archnet website)
129. Nassif House, Jeddah, Saudi Arabia, 1974. (Richards, Serageldin & Rastorfer, 1985)
130. Nassif House, plan. (Archnet website)
131. Al-Sulaiman Palace, Jeddah, Saudi Arabia, 1975, by Abdel Wahed El-Wakil. (Kultermann, 1999)
132. Nile Festival Village, Tarh El-Bahr Island, Luxor, (1977-1982), master's plan and elevation. (Ms., FAAUC, no. 233)
133. Nile Festival Village, unit plans. (Ms., FAAUC, no. 233)
134. Sami House, Dahshur, Giza, 1978. (Archnet website)
135. Sami House, plan. (Richards, Serageldin & Rastorfer, 1985)
136. Al-Sabah House, Fentas, Kuwait, 1978. (FAAUC)
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138. Al-Sabah House, elevation. (Archnet website)
139. Alpha Bianca House, Majorca, Spain, 1979. (Zeitoun, 1993)
140. Alpha Bianca House, plan. (Steele, 1997)
141. Kazerouni House, Shabramant, Giza, 1979. (Author)
142. Kazerouni House, courtyard with three *mashrabiya* in the west-side wall. (Author)
143. Kazerouni House, reception area. (Author)

144. Kazerouni House, main entrance with *mashrabiya* above. (Author)
145. Kazerouni House, plan. (Archnet website)
146. Greiss House, Shabramant, Giza, 1980. (Author)
147. Greiss House, plan. (Steele, 1997)
148. Dar Al-Islam Village, Abiquiu, New Mexico, USA, 1980, master plan. (Steele, 1997)
149. Dar Al-Islam Village, mosque. (Archnet website)
150. Dar Al-Islam Village, mosque interior. (Archnet website)
151. Dar Al-Islam Village, mosque plan. (Richards, Serageldin & Rastorfer, 1985)
152. Dar Al-Islam Village, School. (Brochure of Dar Al-Islam Foundation, 1985)
153. Dar Al-Islam Village, School plan. (Brochure of Dar Al-Islam Foundation, 1985)
154. Presidential Resthouse, Garf Husein, Aswan, 1981. (Archnet website)
155. Presidential Resthouse, plan. (Steele, 1989)
156. Andrioli House, Tunis village, Fayum, 1984. (Author)
157. Andrioli House, plan. (Archnet website)
158. Rashad House, Tanta, 1986. (Steele, 1997)
159. Rashad House, plan. (Archnet website)
160. Talhuni House, Amman, Jordan, 1988. (Steele, 1997)
161. Talhuni House, plan. (Steele, 1989)
162. Journalists' Resort Village, North Coast, west of Alexandria, 1989, master plan. (*Alam Albena*, no. 162, January 1995)
163. Journalists' Resort Village, housing. (Author)
164. Journalists' Resort Village, unit plans. (Khlosi, 1997)
165. Brooklyn Museum's Theban Expedition residential compound, Luxor, Egypt, c. 1978, by Esherick, Homsey, Dodge & Davis. (*Progressive Architecture*, January 1979)
166. Leigh Canney House, Aswan, Egypt, 1905, by CFA Voysey. (Wendy, 1995)
167. Perrycroft House, Malvern Hills, 1893, by CFA Voysey. (Wendy, 1995)
168. Al-Udhaibat Farmhouse, Al-Dariya, Saudi Arabia, reconstructed by Prince Sultan Al Sa'ud in 1986. (*Aramco World*, July / August 1999)
169. Craft and Pottery School, Fayum, Egypt, c. 1970s, by Eyvilin Boria. (Author)
170. Street in old Cairo, c. 1860. (Abu-Lughod, 1971)

171. Bagawat settlement, Kharga Oasis, 4th century. (Richards, Serageldin & Rastorfer, 1985)
172. Santorini Village, Santorini, Greece, 1960, by Constantinos Doxiadis. (Architectural Review, March 1960)
173. Notre Dame du Haut Chapel, Ronchamp, (1950-1954), by Le Corbusier. (Le Corbusier, 1966, v. VI)
174. Saint Francis of Assisi Church, Pampulha, State of Minas Gerais, Brazil, 1943, by Oscar Niemeyer. (Papadaki, 1960)
175. T. P. Martin House, Taos, New Mexico, 1915, by Rudolph Schindler. (Gebhard, 1971)
176. Cooperative Homesteads Project, Detroit, Michigan, (1941-1945), by Frank Lloyd Wright. (Futagawa, 1988)
177. Sainte-Baume Shrine, near Marseilles, 1948, by Le Corbusier. (Le Corbusier, 1966, v. V)
178. Byker Wall Housing Project, Newcastle-on-Tyne, (1969-1980), by Ralph Erskine. (Egelius, 1990)
179. Halawa house, Al-Agamy, near Alexandria, (1972-1975), by Abdel Wahid El-Wakil. (Author)
180. Corniche mosque, Jeddah, Saudi Arabia, 1986, by Abdel Wahid El-Wakil. (Frampton, & Khan, 2000)
181. Al-Touni House, Fayum, 1990, by Ahmed Hamid. *(Arts & The Islamic World*, no. 21, Spring 1992)
182. Mopti Medical Centre, Mali, 1976, by André Ravereau. (Frampton, Kultermann, 2000)
183. Kaedi Hospital, Mauritania, 1989, by Fabrizio Carola. (*Architectural Review*, no. 1185, November 1995)
184. Pilot Project House, Luxor, (1978-1980), by David Sims and Olivier Sednaoui. (*Arts & The Islamic World*, no. 2, Summer 1984)
185. Swan House, Texas, c. 1999, by Simone Swan. (*Aramco World*, July / August 1999)
186. Abo Ghueillah Housing project, Amman, Jordan, 1979, by Rasem Badran. (Kultermann, 1999)

187. Felfela Tourist Complex, Hurghada, Egypt, c. 1990s, by Omar El-Farouk. (*Mimar*, September 1991)
188. Hager Al-Dabiya Village, south Luxor, Egypt, c.1990, by Ahmed Abdou. (Author)
189. Bitter Lakes Villa, Suez Canal, Egypt, 1989, by Mohamed Al-Husseiny. (*Mimar*, June 1991)
190. Al-Nawras Tourist Village, Ismailia, Egypt, c. 1980, by Abdelbaki Ibrahim. (Kultermann, 1999)
191. Tobacco Monopoly Building, Baghdad, Iraq, 1966, by Rifat Chadirji. (Chadirji, 1986)
192. Qasr Al-Hakim complex, Riyadh, Saudi Arabia, (1985-1992), by Rasem Badran. (Frampton & Khan, 2000)
193. Sanafir Hotel, Sharm El-Sheikh, Egypt, 1986, by unknown architect. (Author)
194. Miramar Hotel, Hurghada, Egypt, c. 1997, by Michael Graves, main entrance of the village. (Author)
195. Miramar Hotel, lake view. (Author)
196. Miramar Hotel, housing units. (Author)
197. Miramar Hotel, arcaded street. (Author)

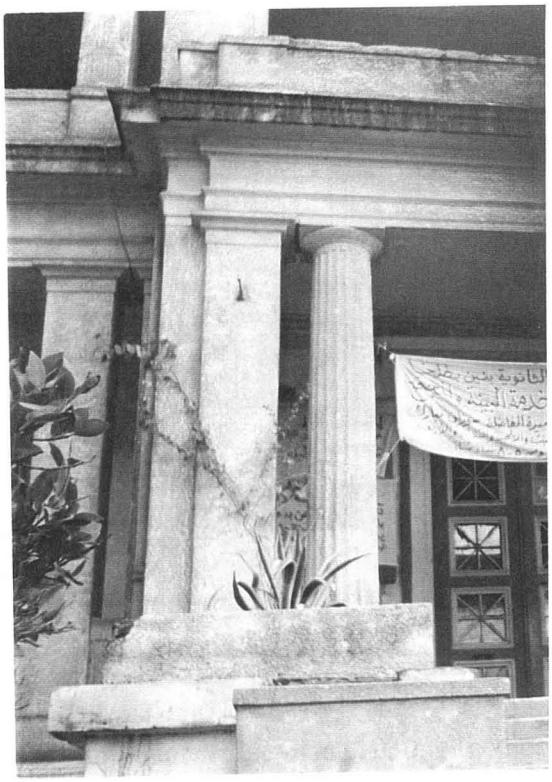
1. Ahmed Fathy, Fathy's father
(d. 1933)

2. Del Bassand, Fathy's mother
(d. 1927)

3. Fathy, his wife, brothers, sisters and relatives.
Back row: Hassan Fathy is second from the right
Second row: Fathy's wife is third from the left

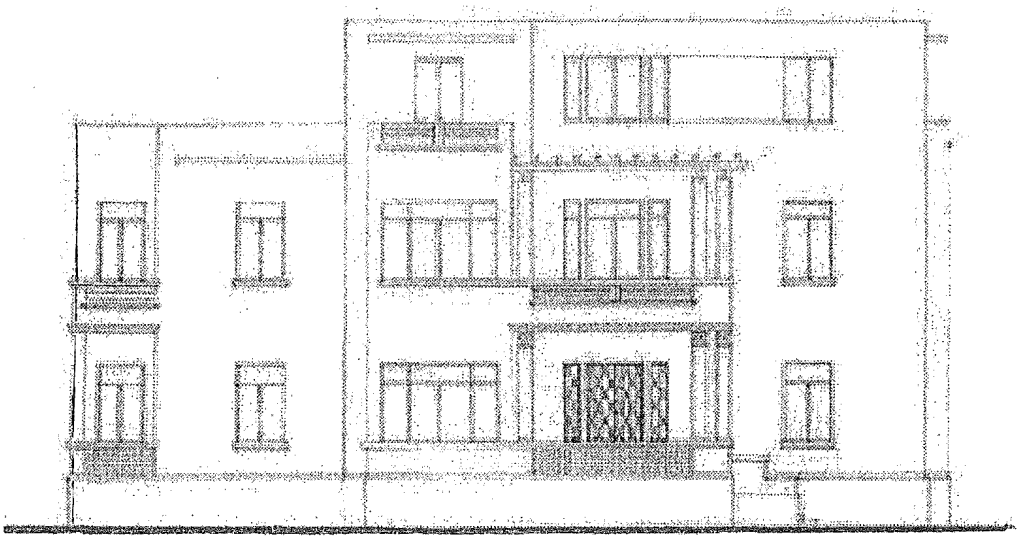
4. Khediveya High School, Cairo.

5. Talkha Primary School, Talkha, 1928.

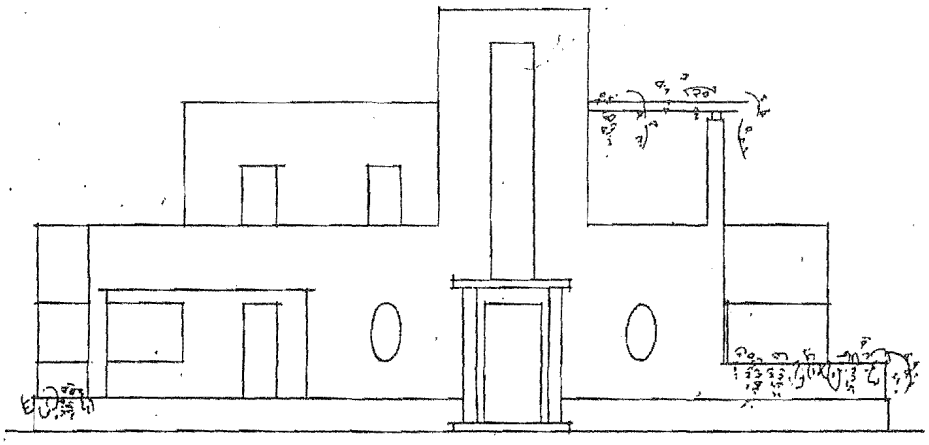


6. Talkha Primary School, portico with Doric columns.

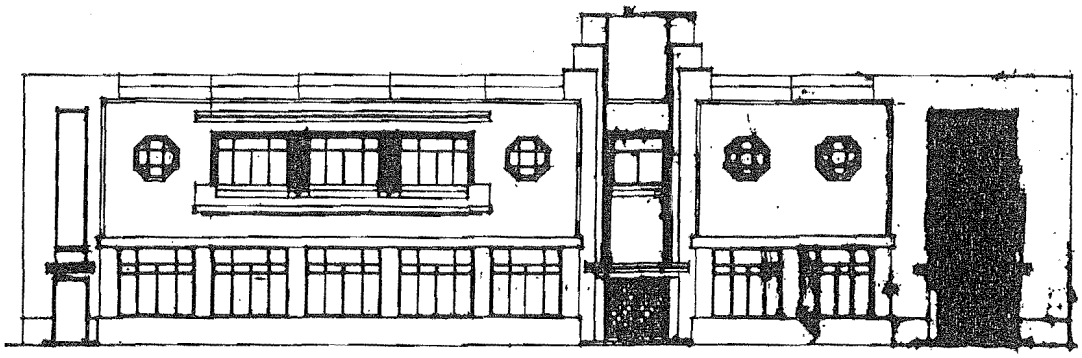
7. Talkha Primary School, classical details.



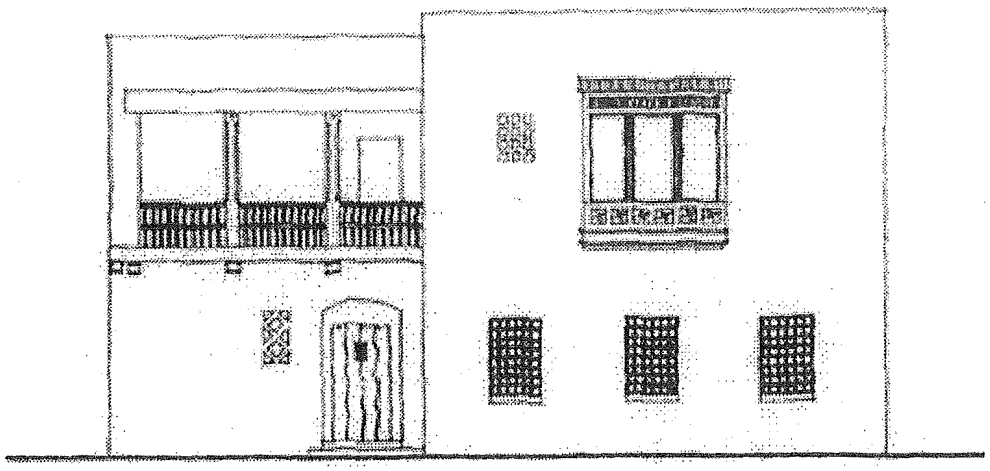
8. Hosni Omar Villa, Giza, 1930, elevation.



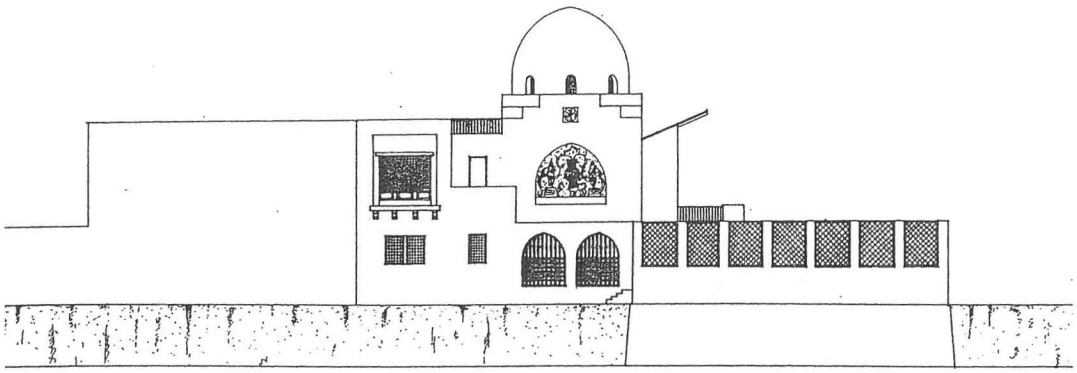
9. La Giardiniera Kiosk, Bulaq, Cairo, 1930, elevation.



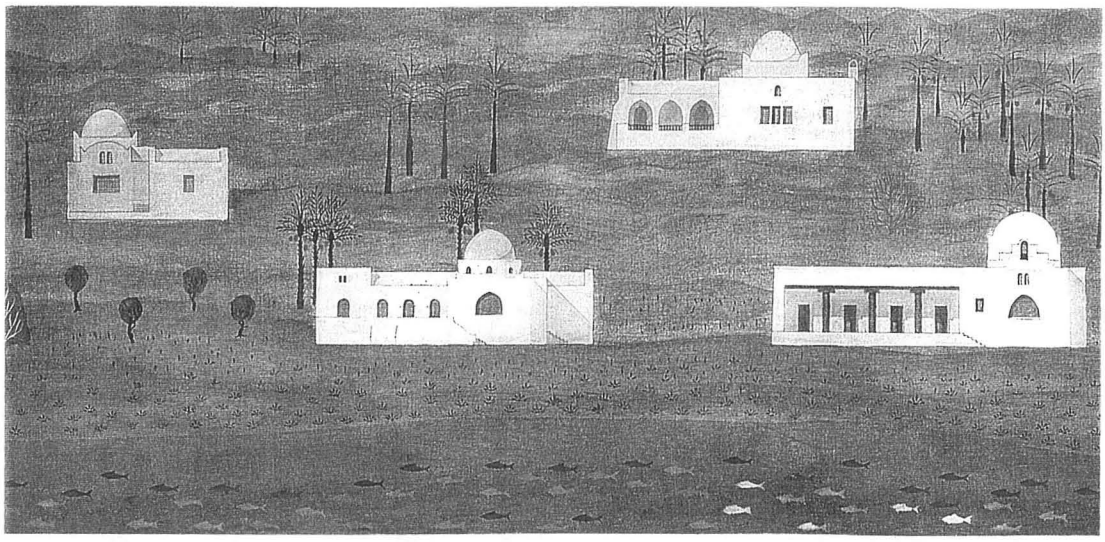
10. Bosphore Casino, Bab Al-Hadid, Cairo, 1932, elevation.



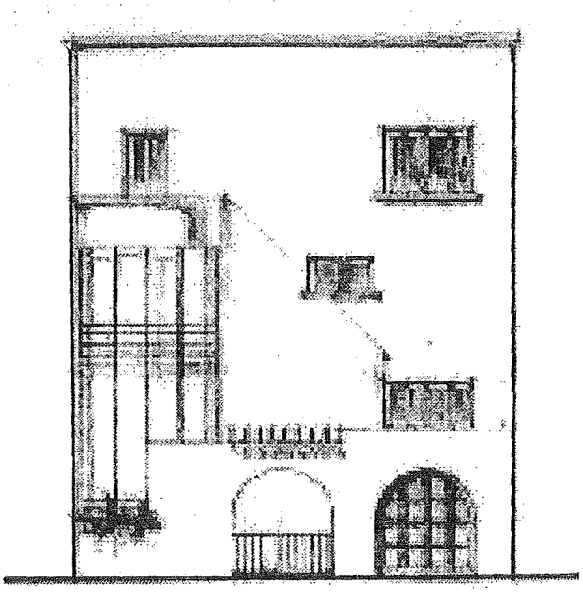
11. Garvice House, Cairo, 1937, elevation.



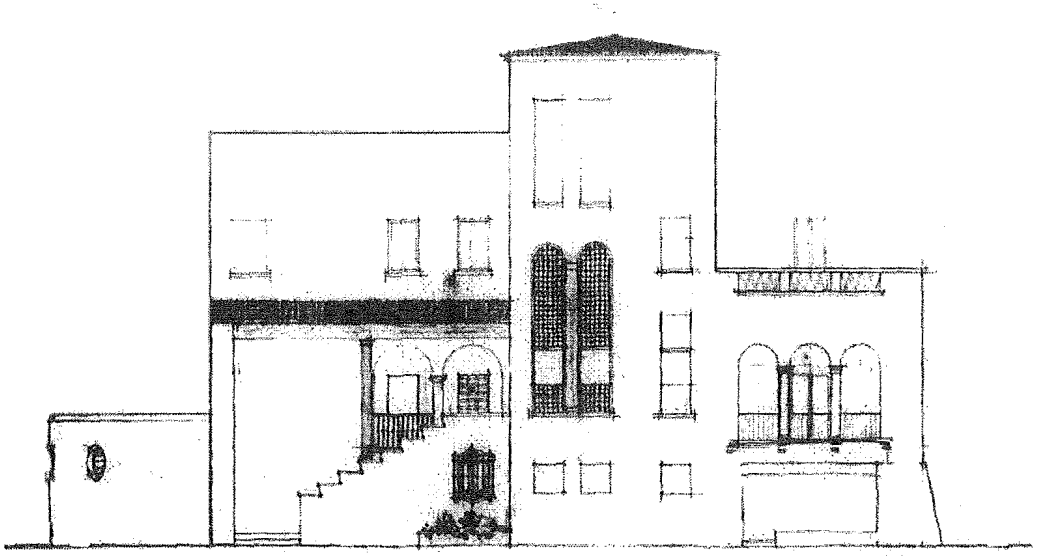
12. Al-Emari Villa, Sidmant Al-Gabal, Fayum, 1937, elevation.



13. Gouache from the Mansoura Exhibition, Mansoura, 1937.

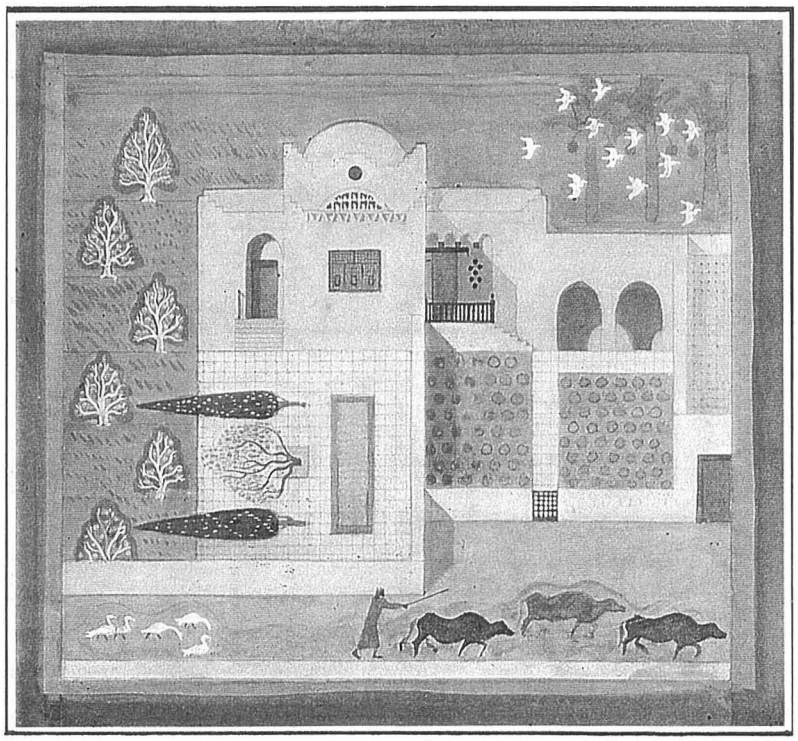


14. Al-Hariri Villa, Giza, 1938, elevation.

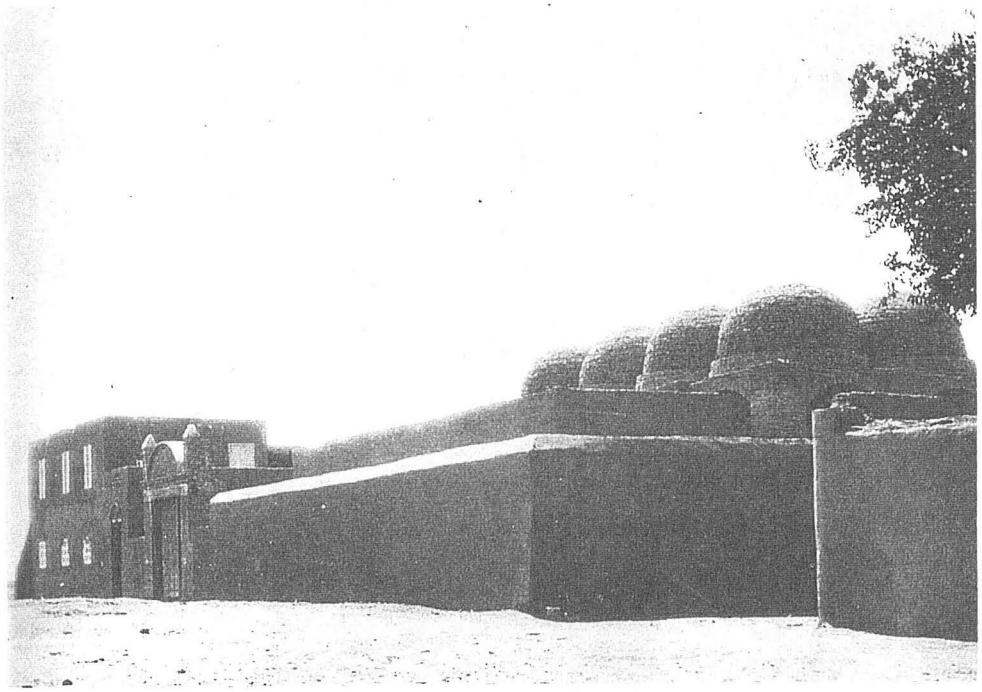


15. Mohammed Fathy Villa, Kom Al-Akhdar, 1938, elevation.

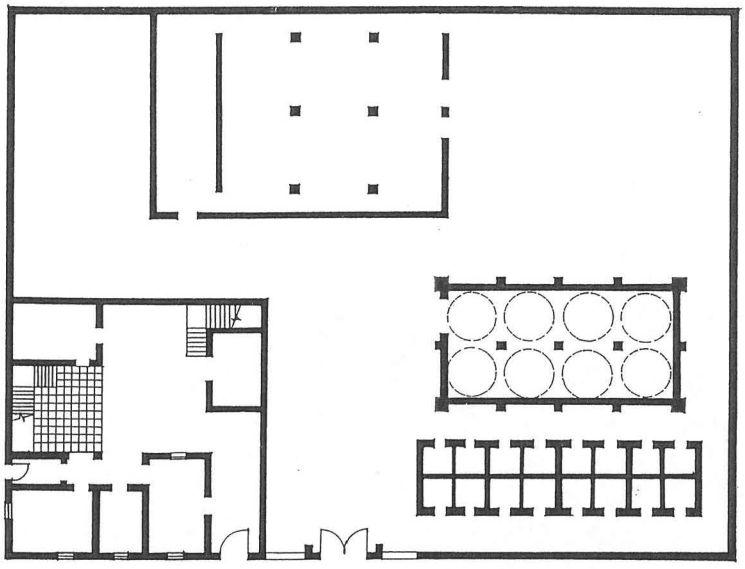
16. Hishmat Villa, Dokki, Cairo, 1938, elevation.



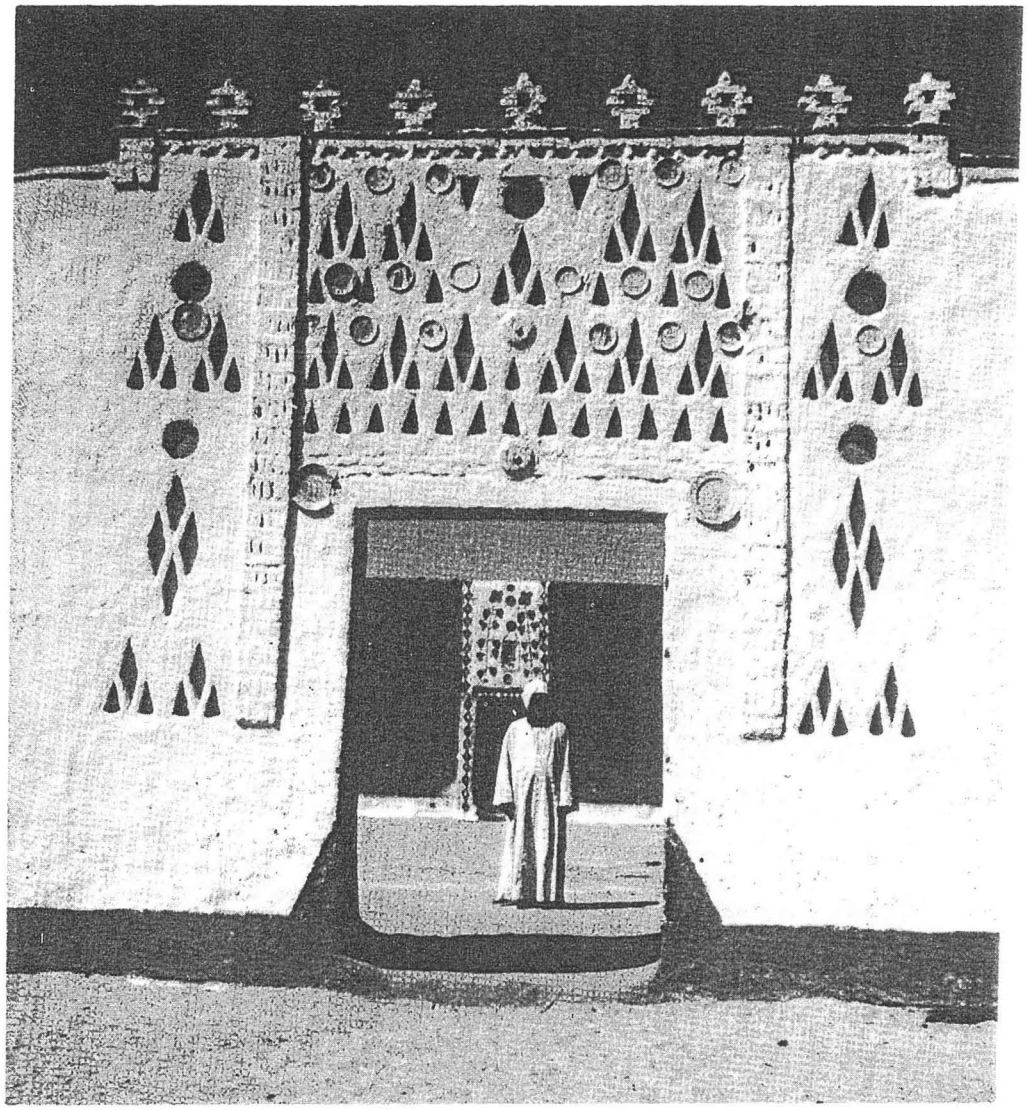
17. Al-Razik Villa, Abu-Girg, 1941, elevation (gouache).



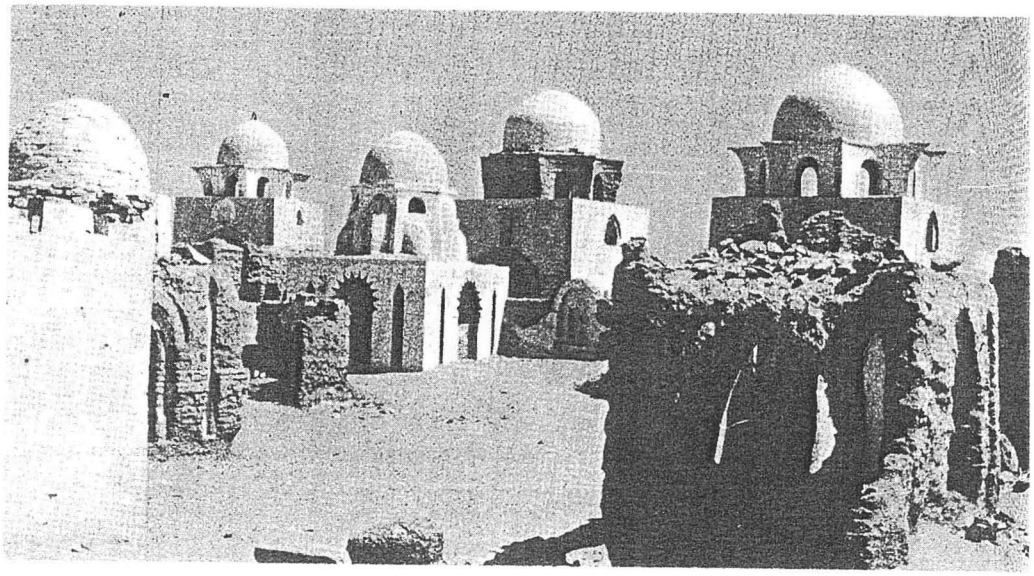
18. Royal Society of Agriculture Farm, Bahtim, 1941.



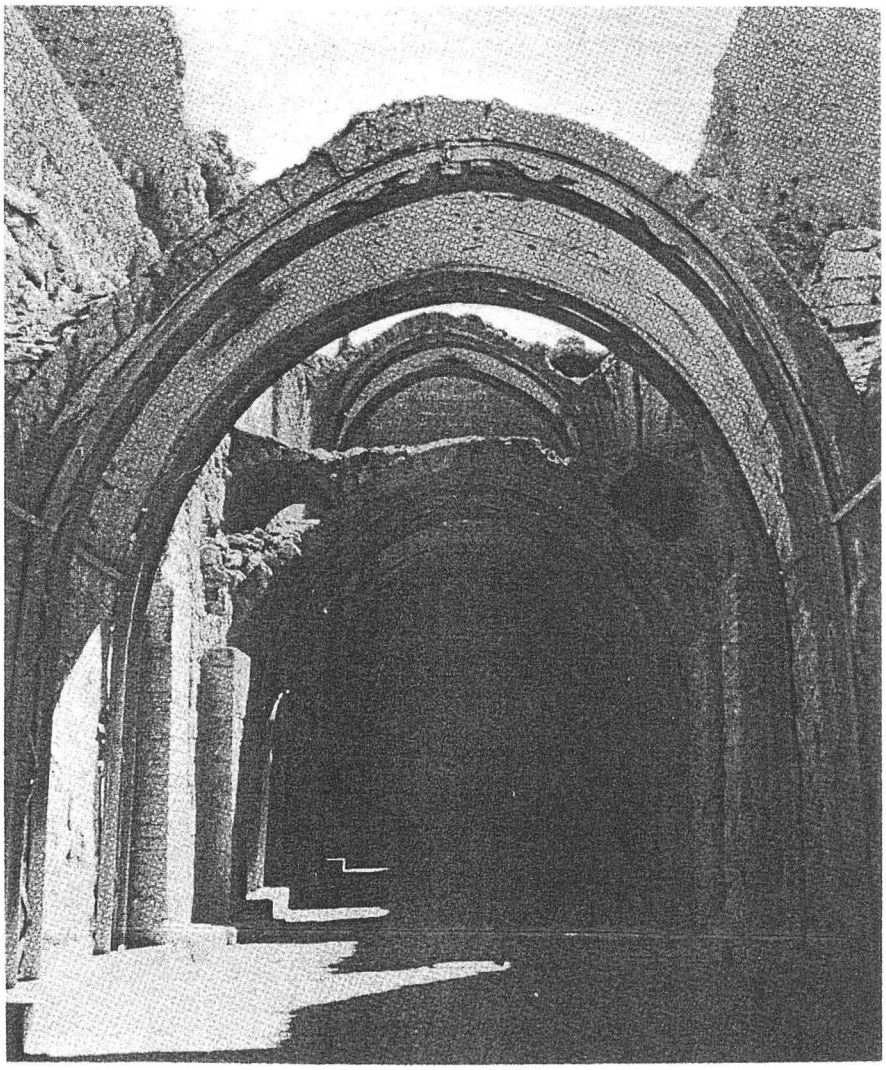
19. Royal Society of Agriculture Farm, plan.



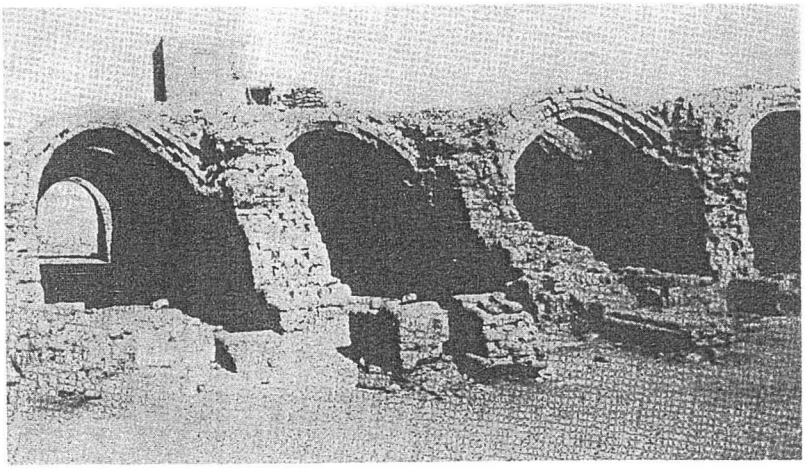
20. Village of Dahmit, Nubia, doorway with claustra-work.



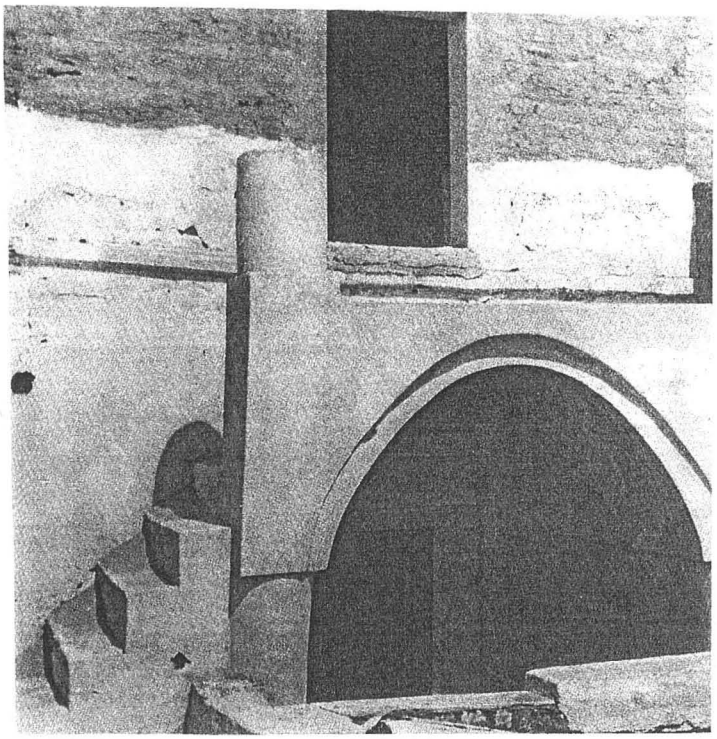
21. Fatimid Cemetery, Aswan, 10th century.



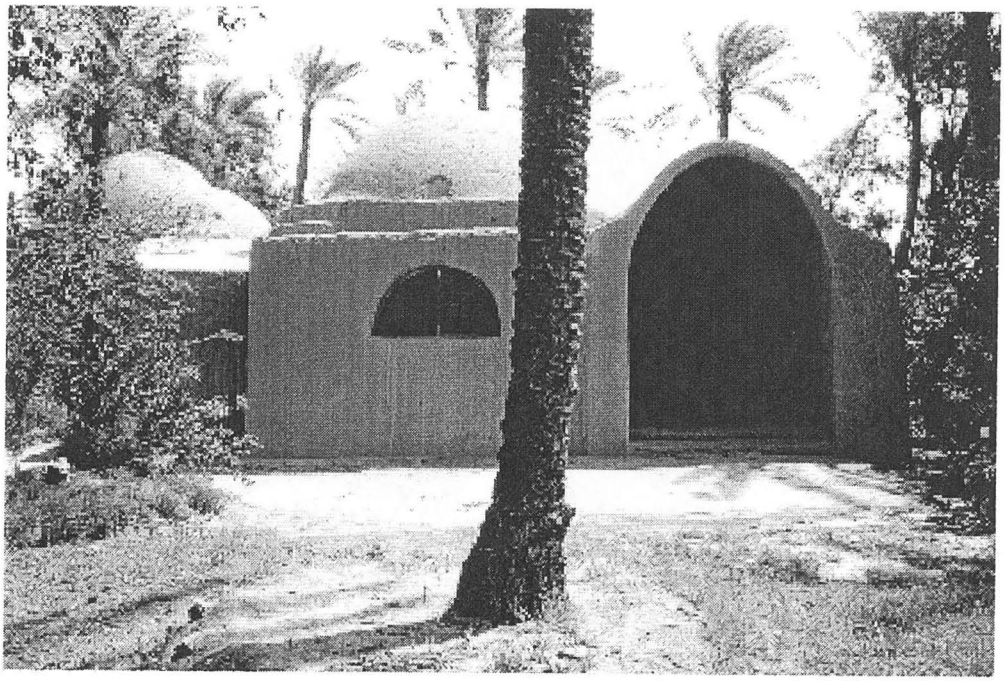
22. Monastery of St. Simeon, Aswan, 10th century.



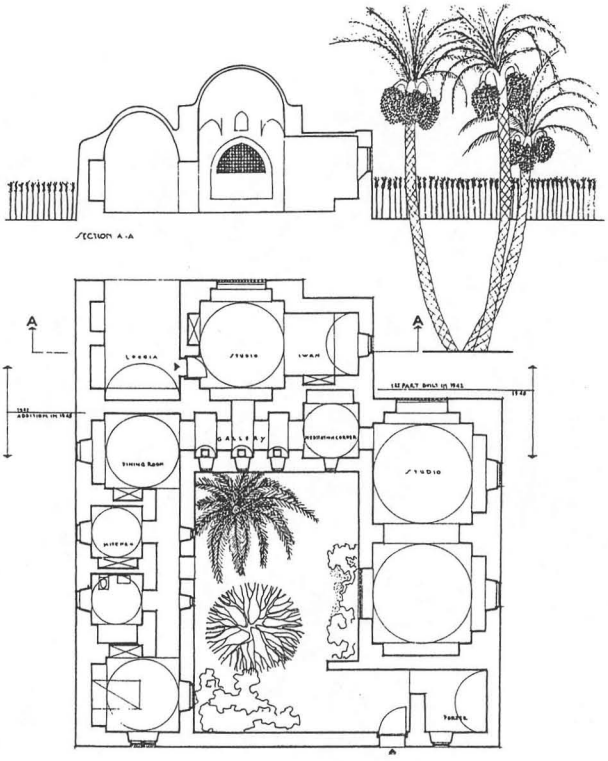
23. Granary of the Ramesseum, Luxor, 19th dynasty.



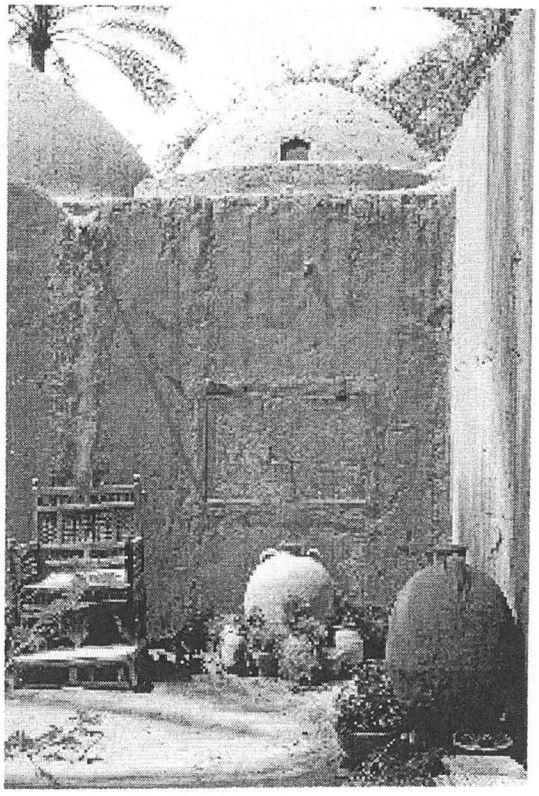
24. Vault supporting staircase, Touna Al-Gabal, Ptolemaic period.



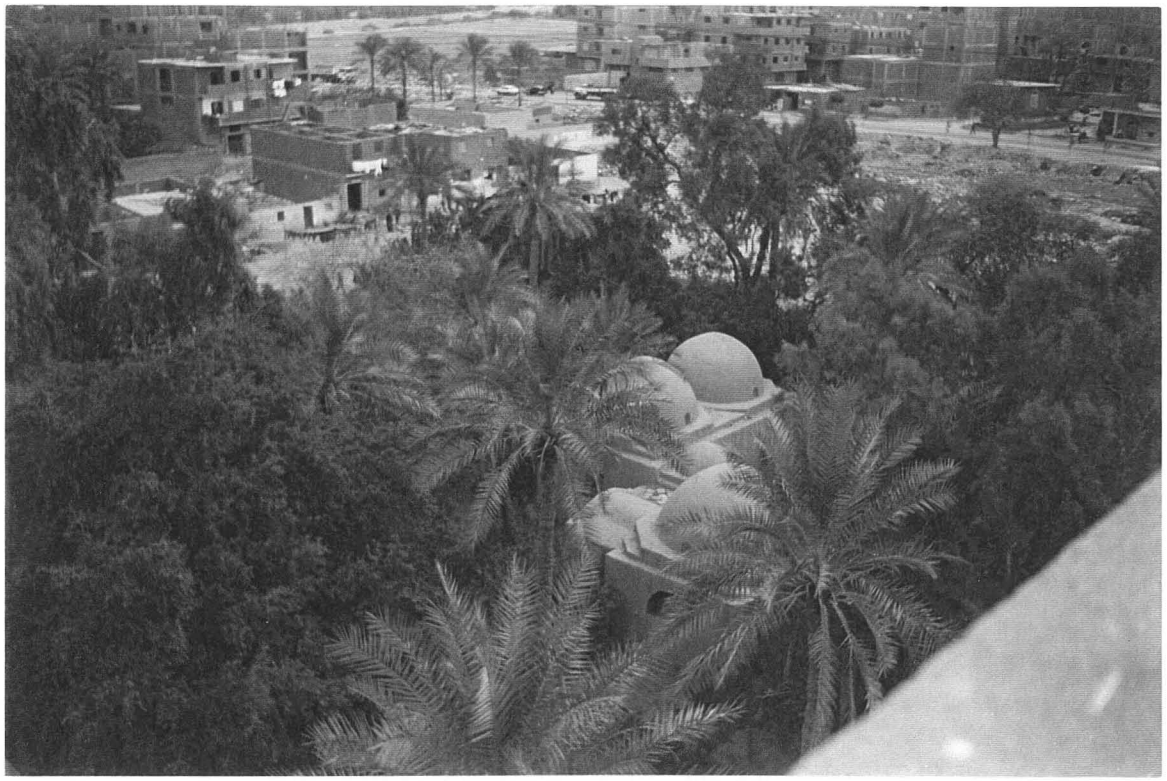
25. Said House, Marg, 1942.



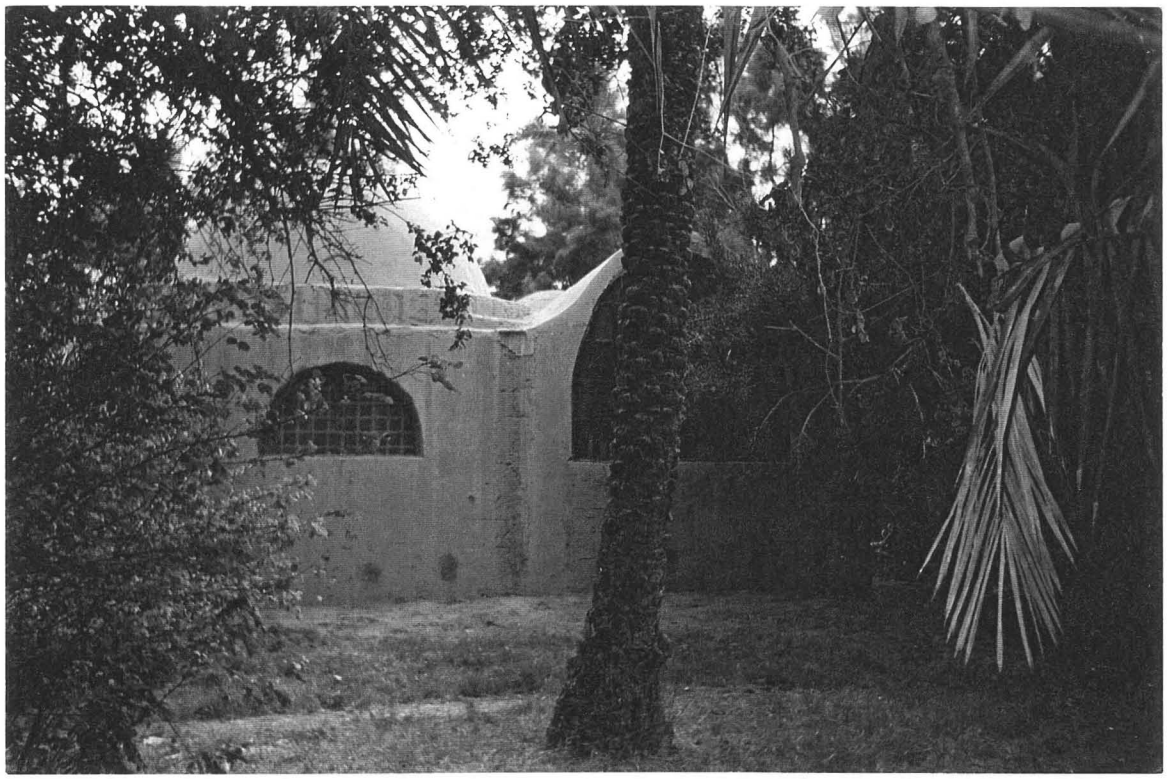
26. Said House, plan and cross section.



27. Said House, courtyard.



28. Said House, view in 2000.



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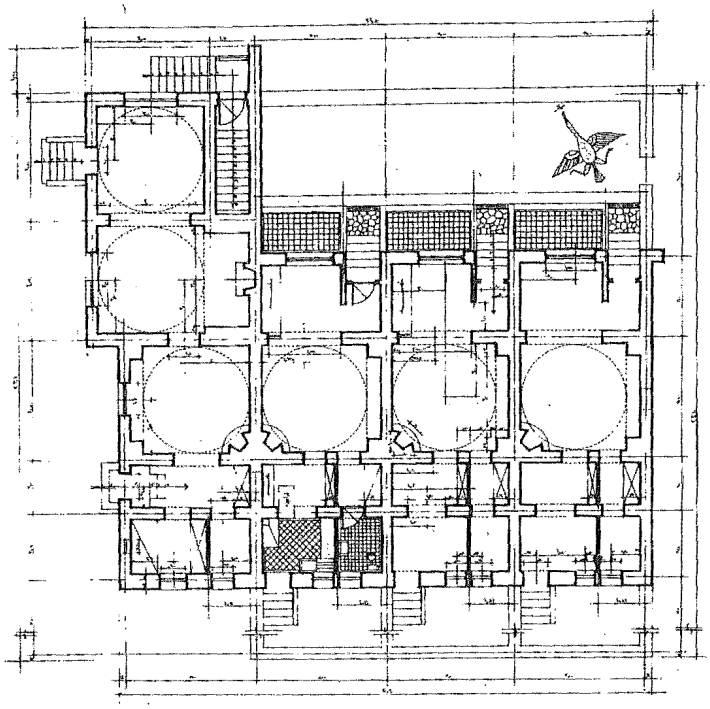
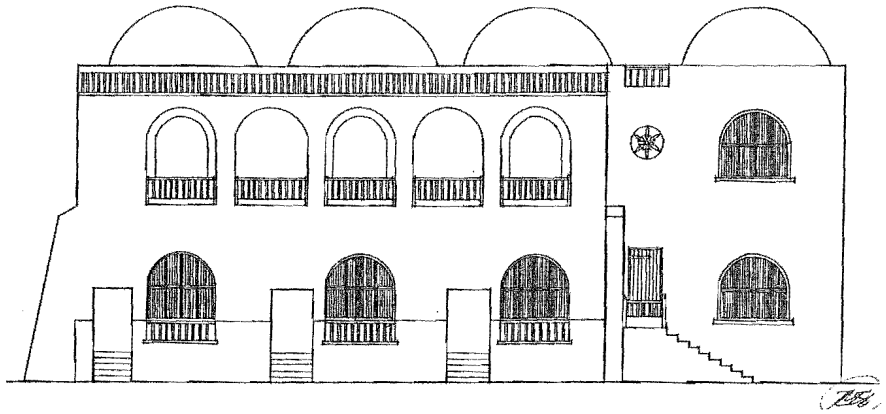
30. Ezbet El-Basri model-house, Ma'adi, Cairo, 1942.

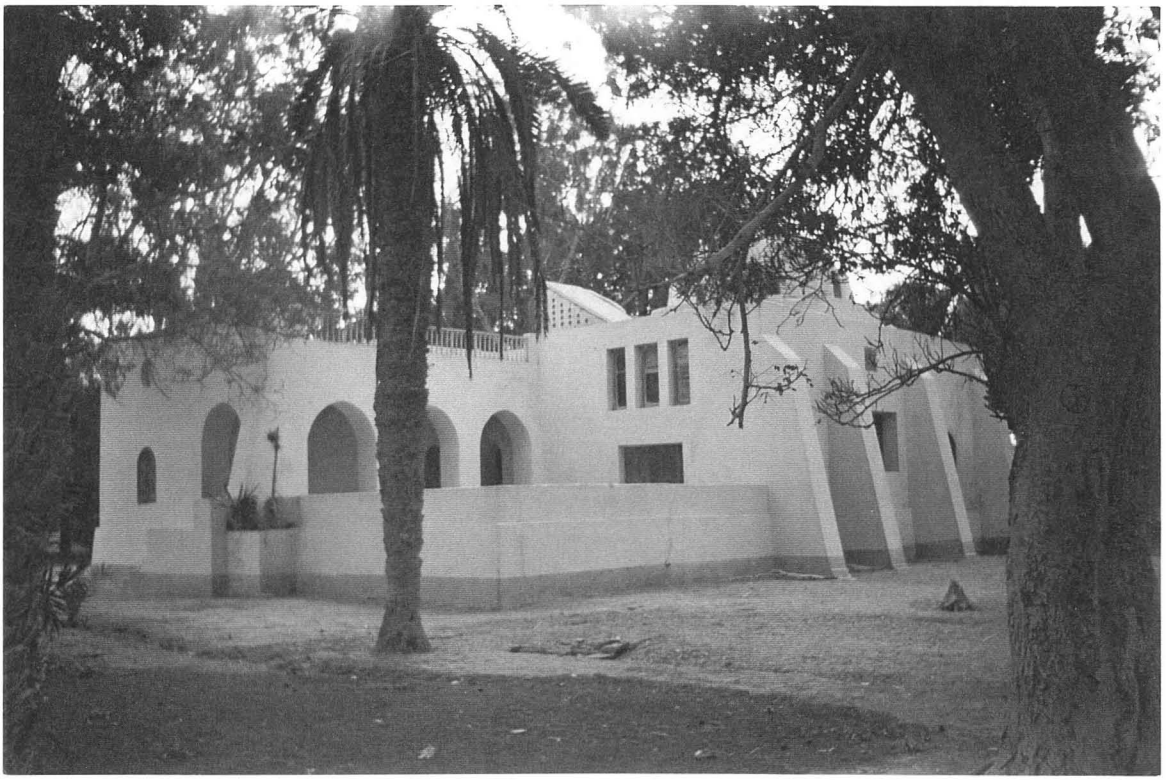
31. Ezbet El-Basri, Cairo, 1942, row of concrete houses, by the Egyptian Red Crescent's architect.



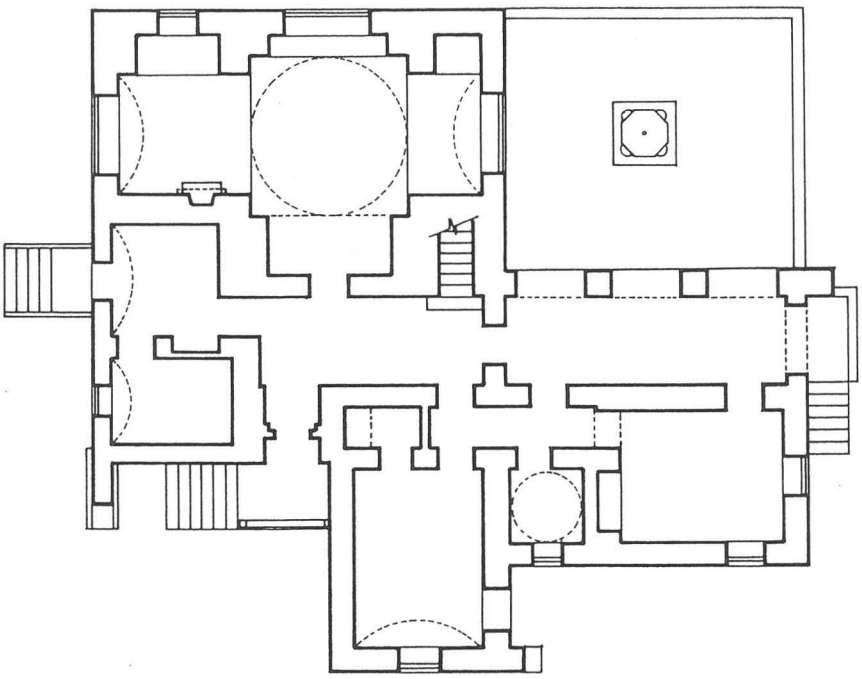
32. Chilean Nitrate Company Resthouse, Safaga, 1942, plan.



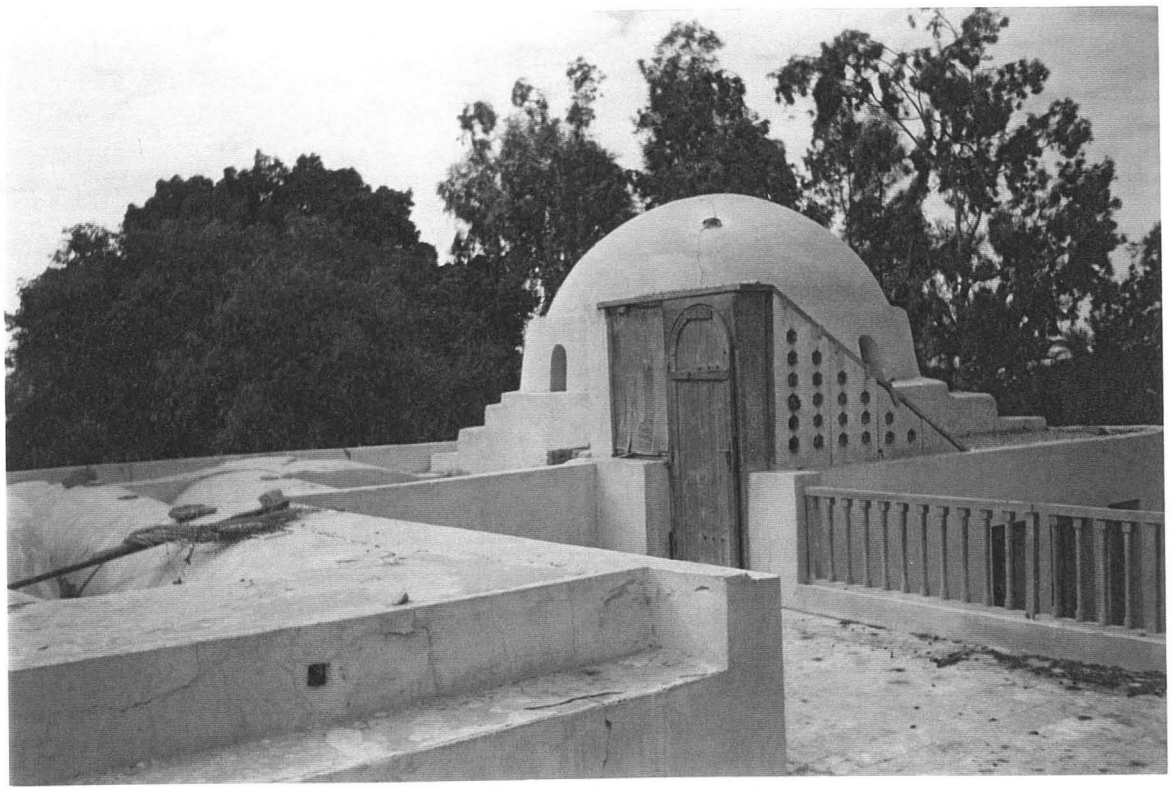
33. Chilean Nitrate Company Resthouse, elevation.



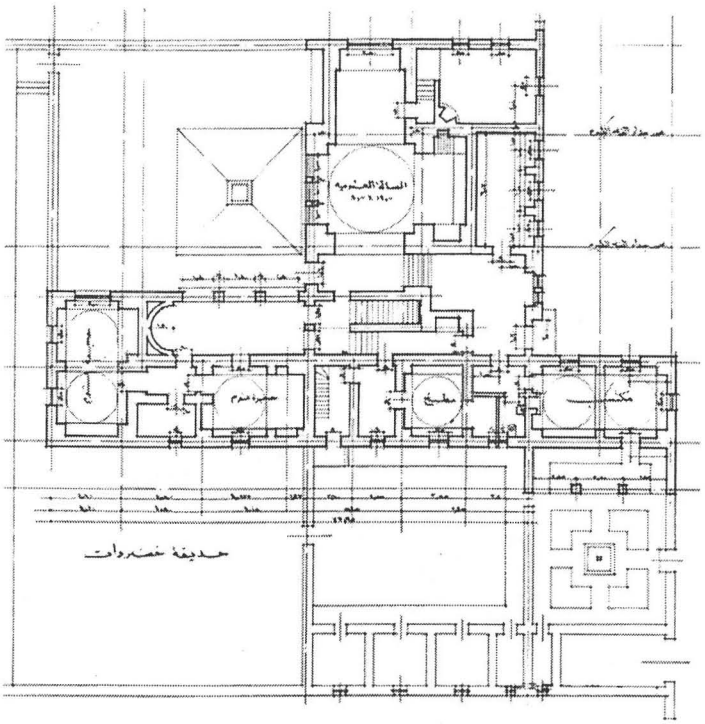
34. Al-Nasr House, Fayum, 1945.



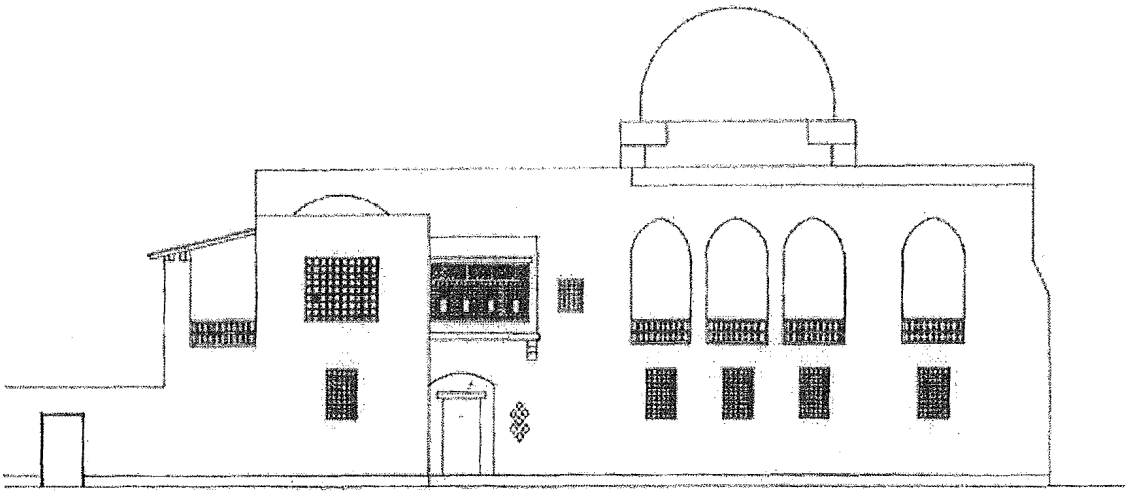
35. Al-Nasr House, plan.



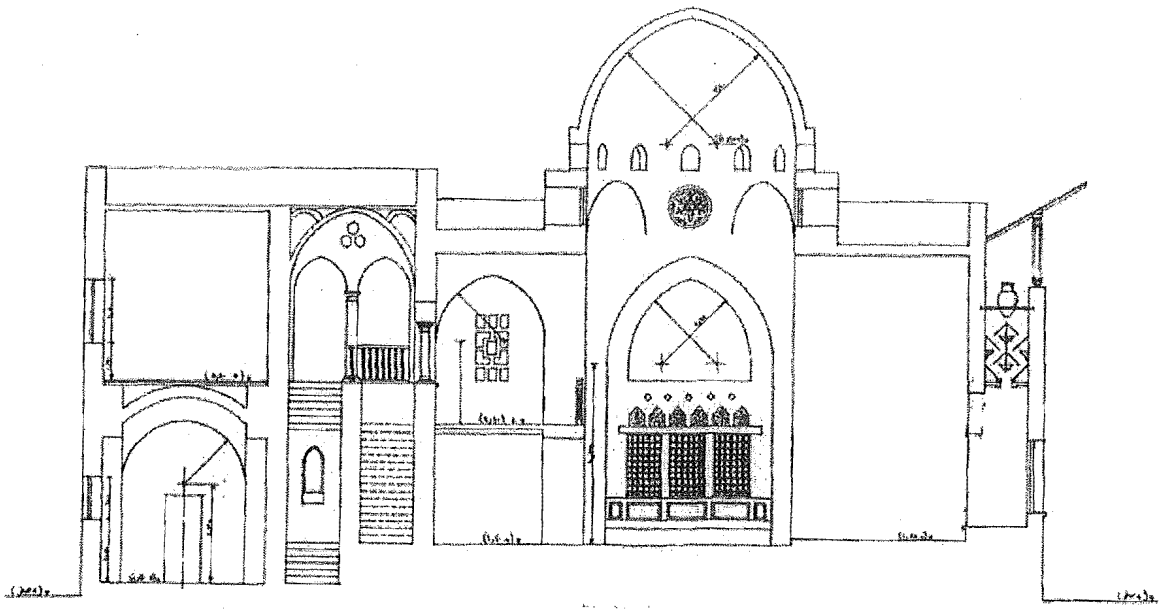
36. Al-Nasr House, *malqaf* / stairwell.



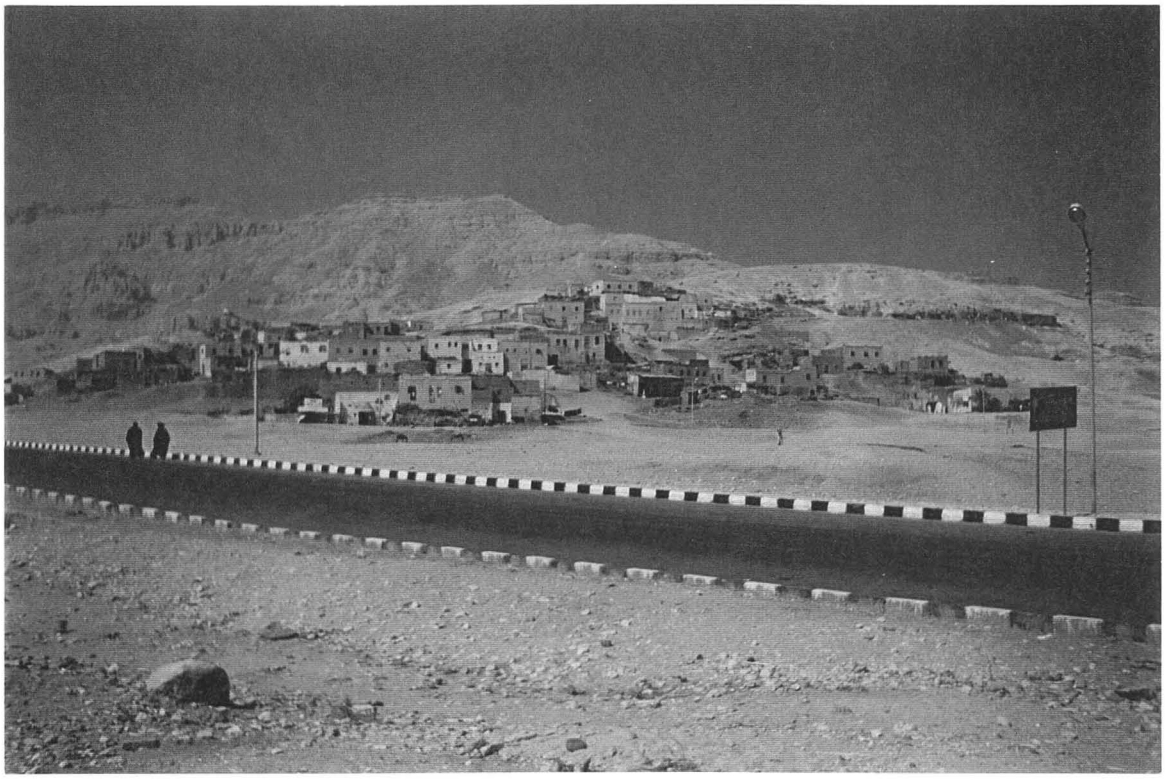
37. Kallini House, Samalut, El-Menia, 1945, plan.



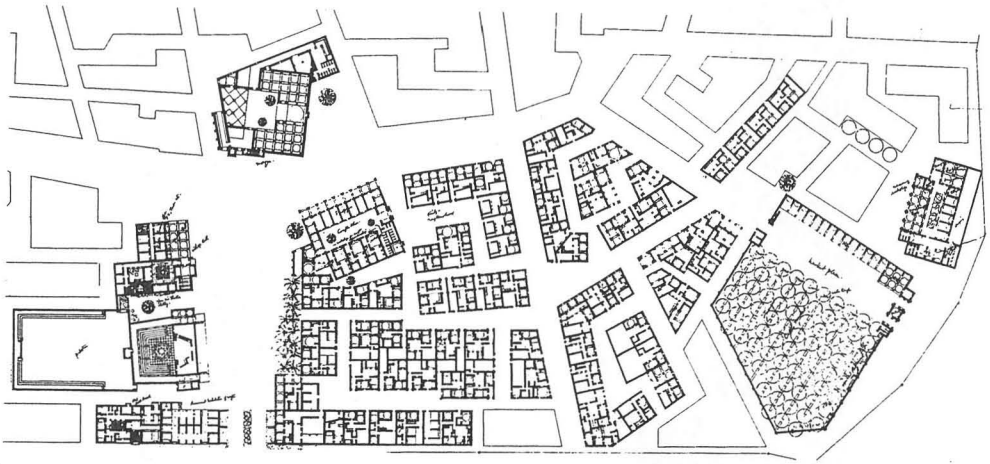
38. Kallini House, elevation.



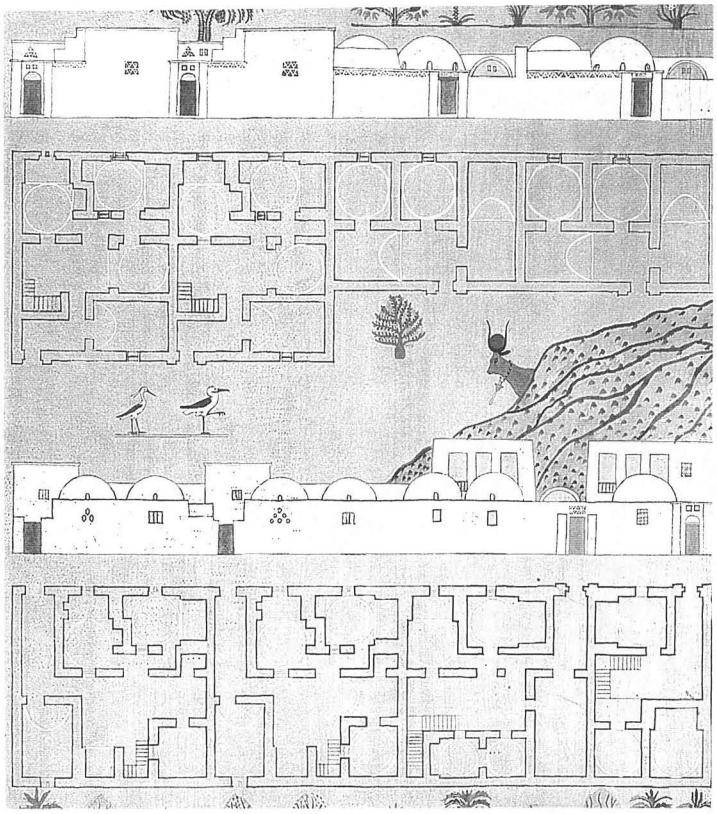
39. Kallini House, cross section.



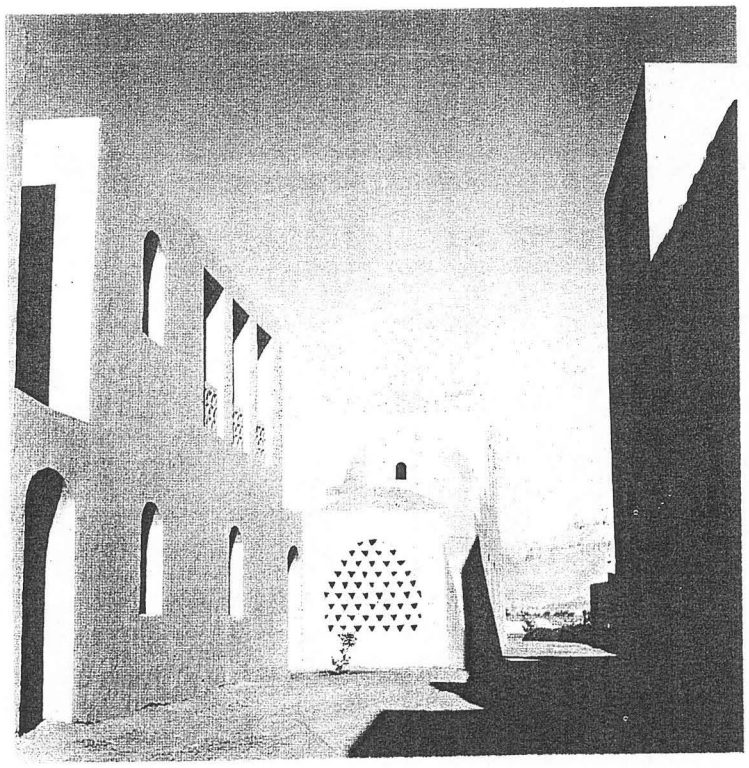
40. Old Gourna Village, Luxor.



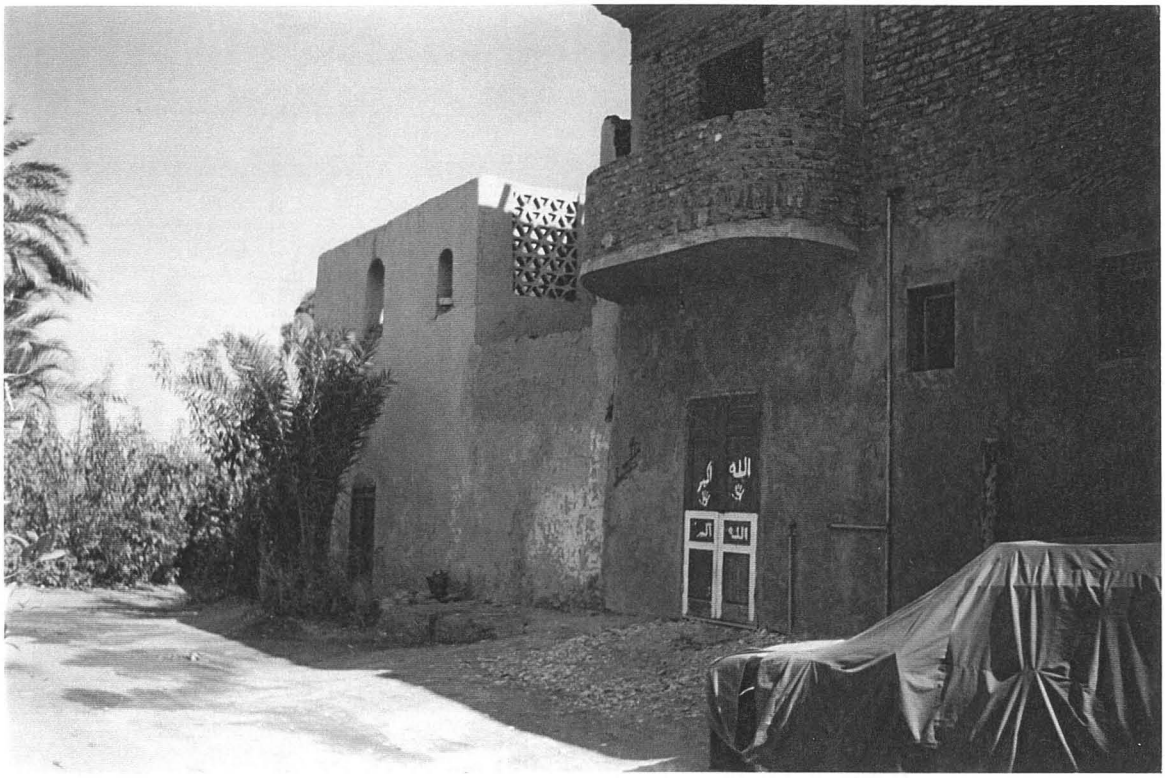
41. New Gourna Village, Luxor, (1945-1948), master plan.



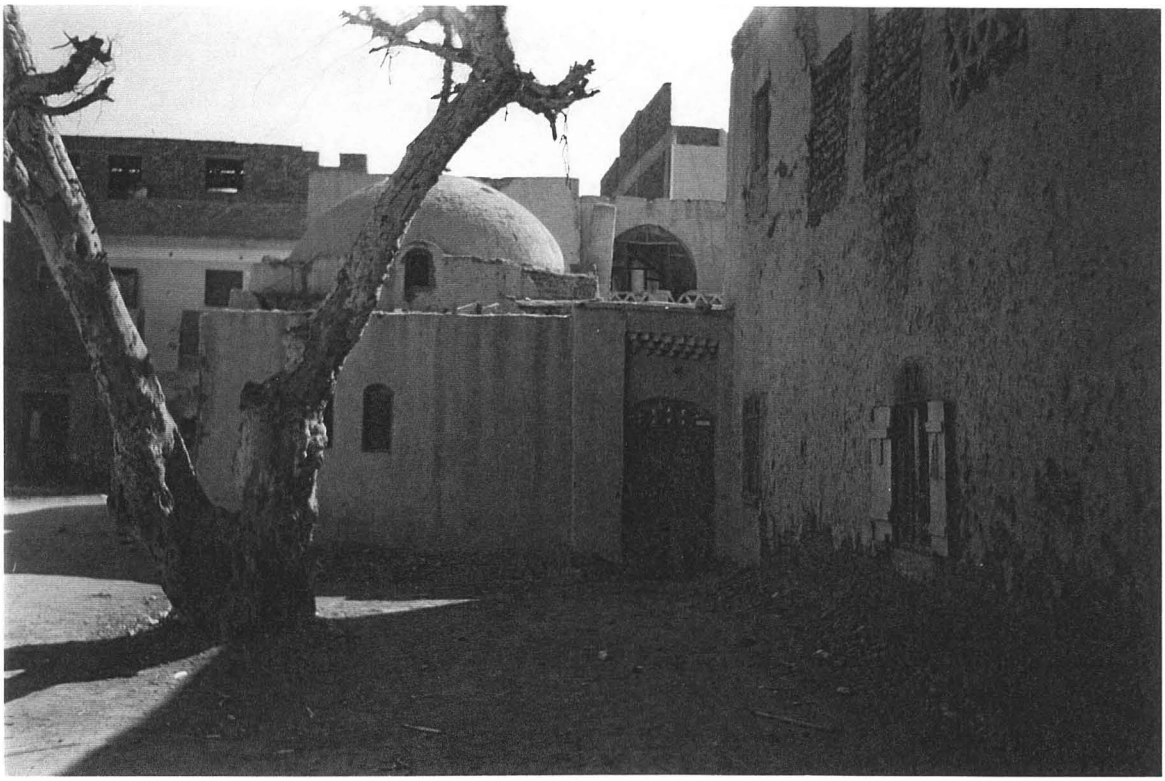
42. New Gourna Village, test design with plants and animals.



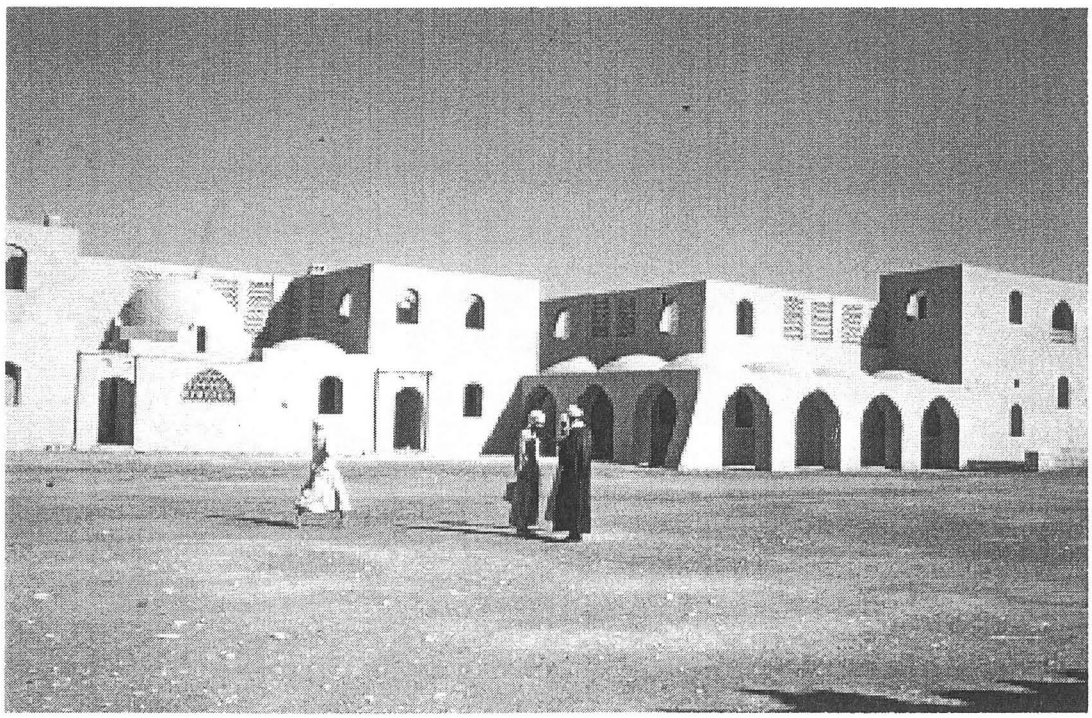
43. New Gourna Village, housing in 1948.



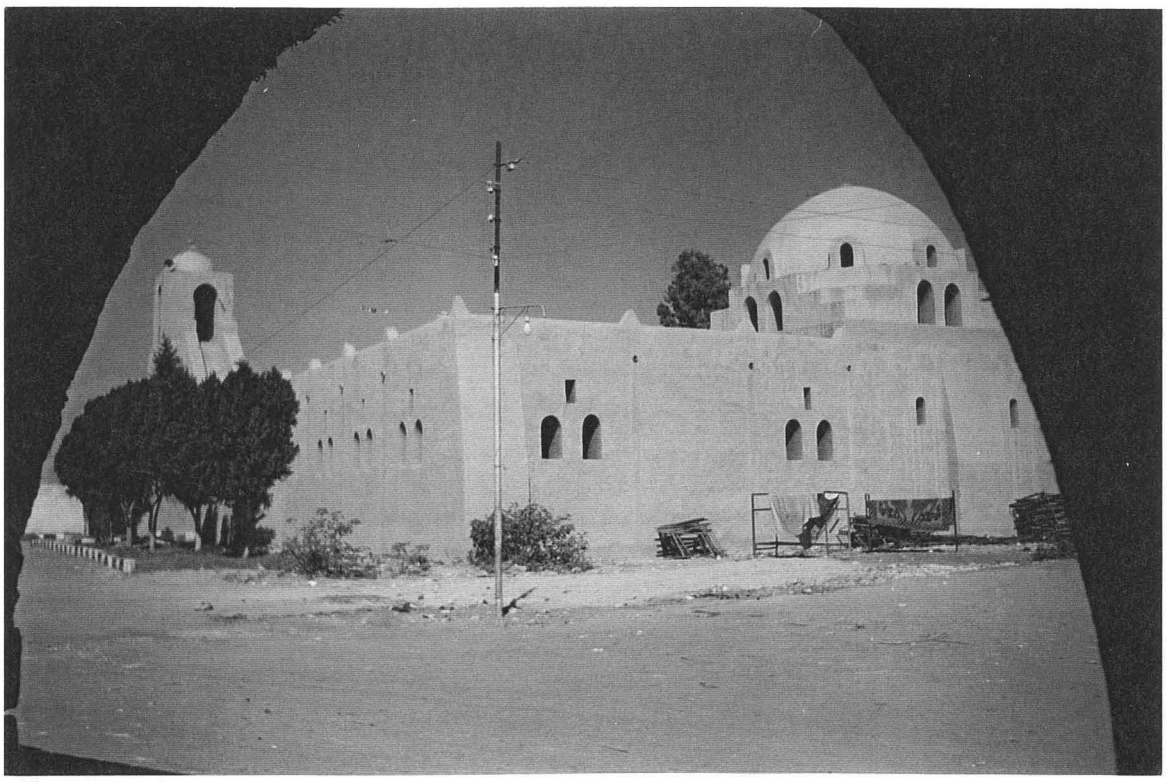
44. New Gourna Village, housing in 2000.



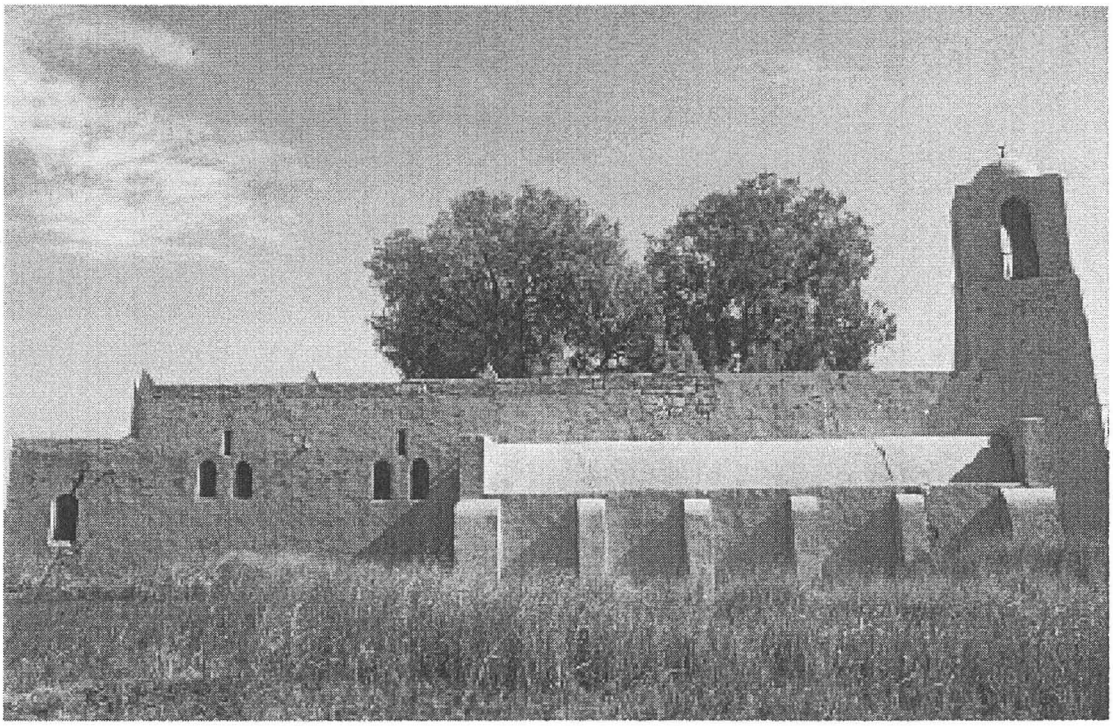
45. New Gourna Village, Fathy's house.



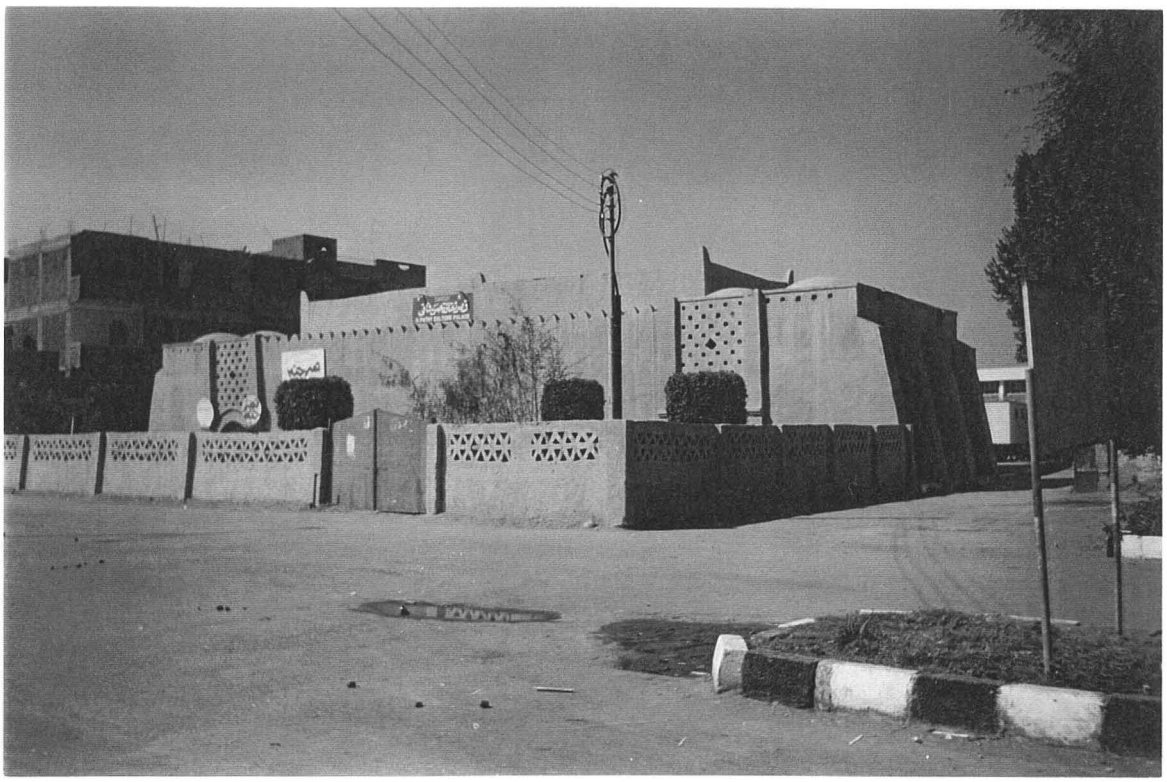
46. New Gourna Village, street to the main square.



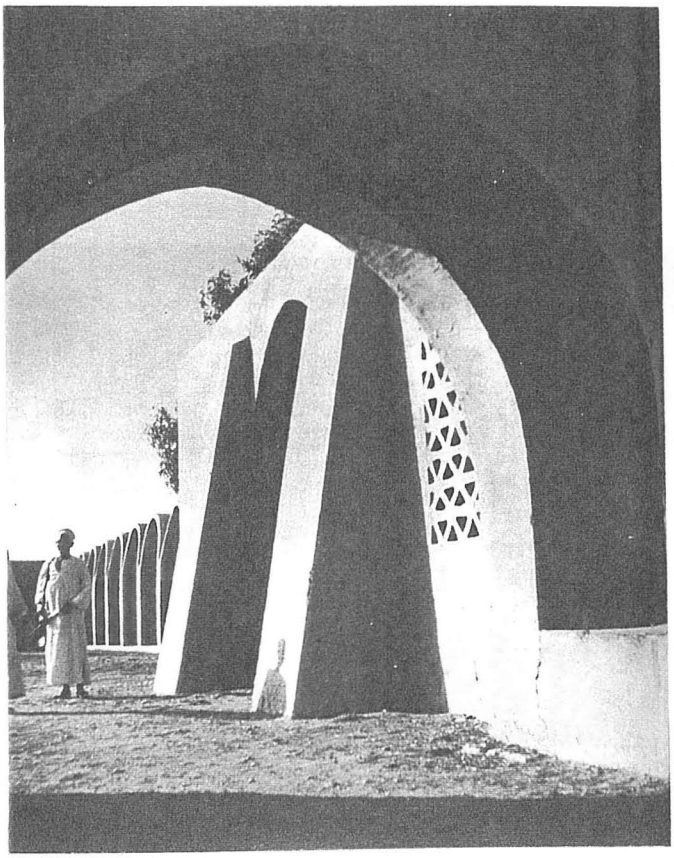
47. New Gourna Village, mosque.



48. New Gourna Village, *madyafa* (gallery) attached to the mosque.

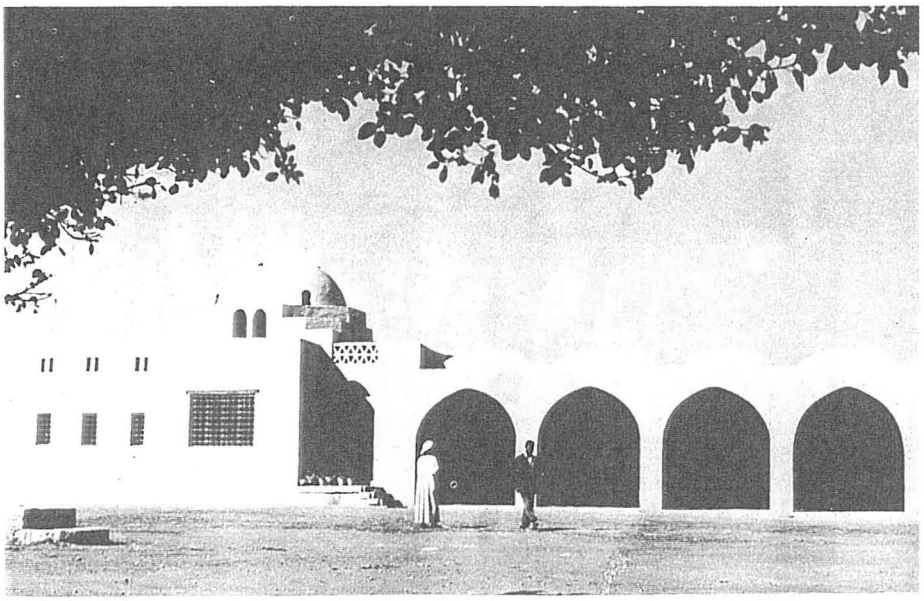


49. New Gourna Village, theatre.

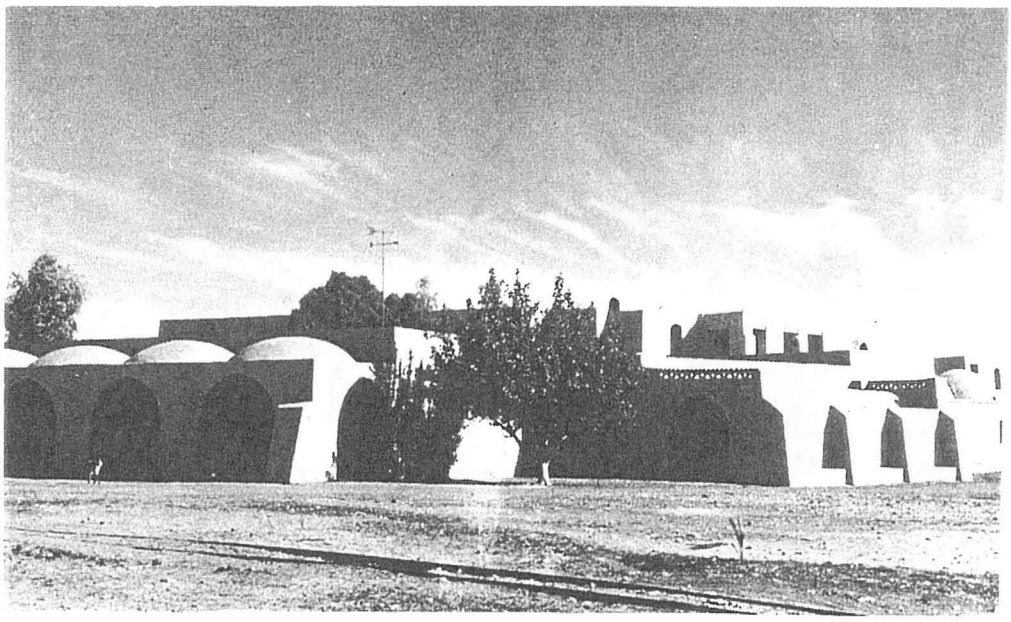


50. New Gourna Village, marketplace in 1948.

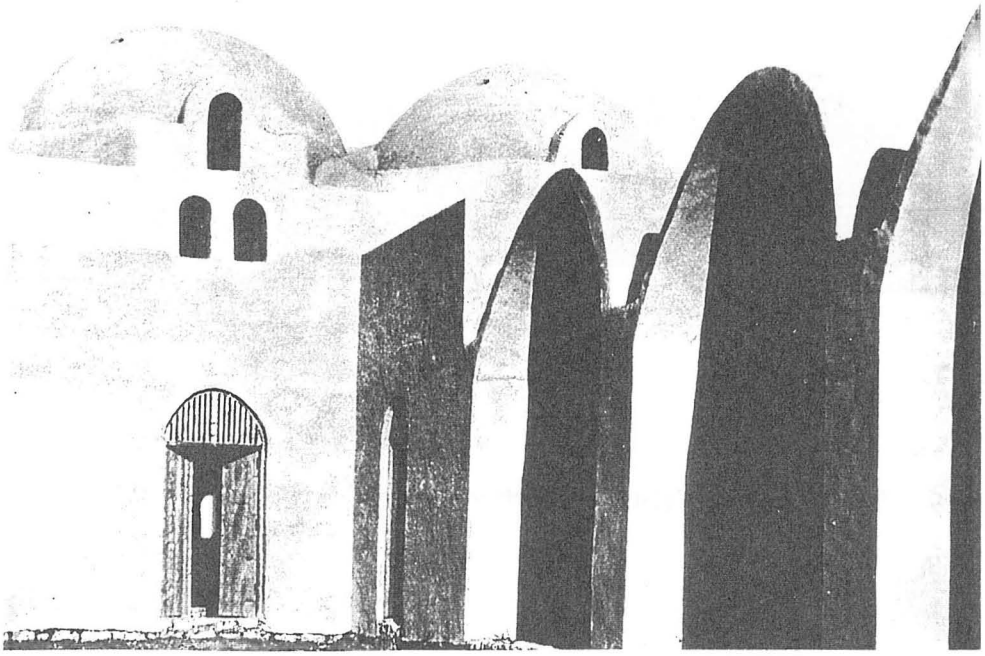
51. New Gourna Village, marketplace in 2000.



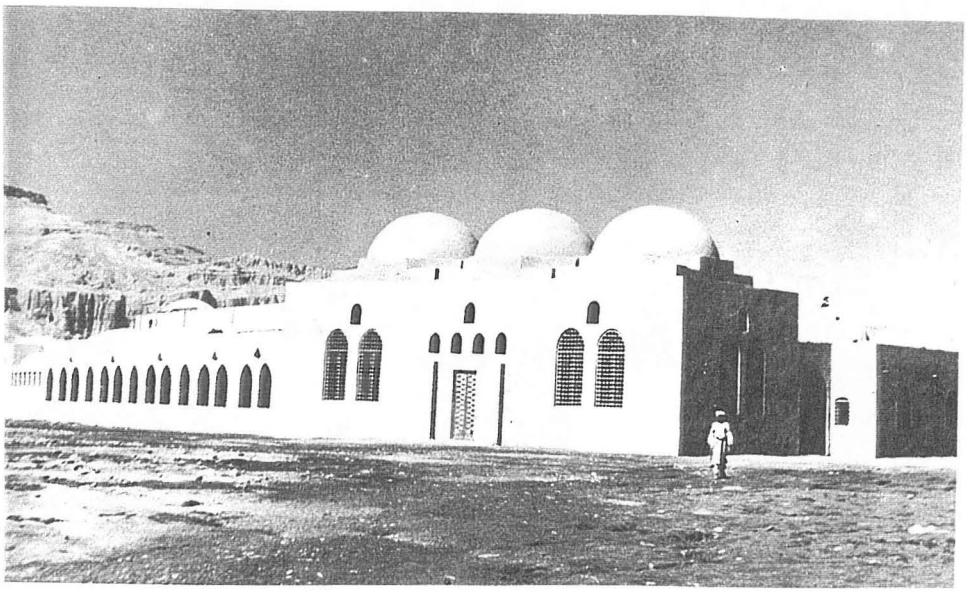
52. New Gourna Village, exhibition hall.



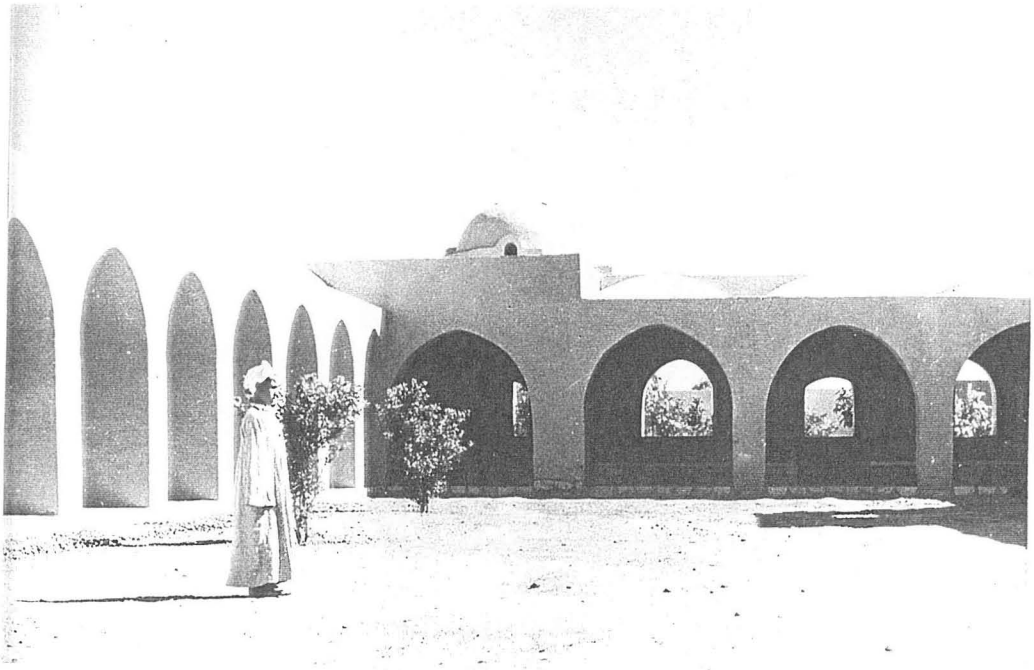
53. New Gourna Village, khan.



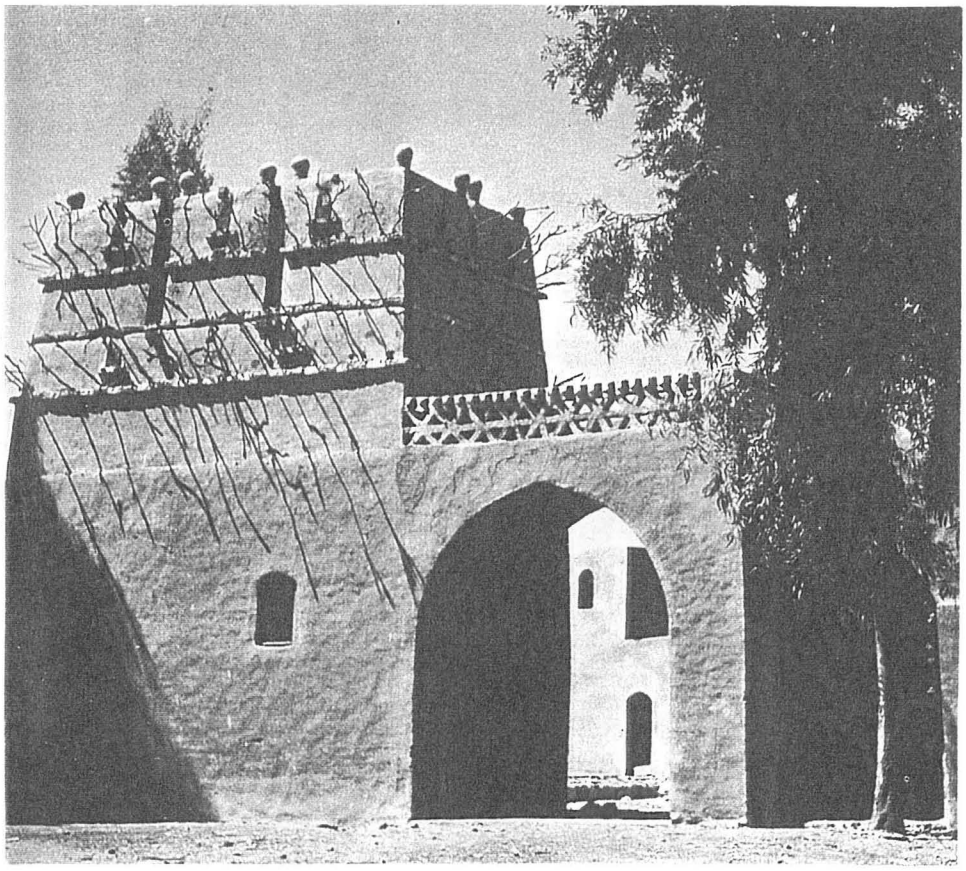
54. New Gourna Village, crafts school.



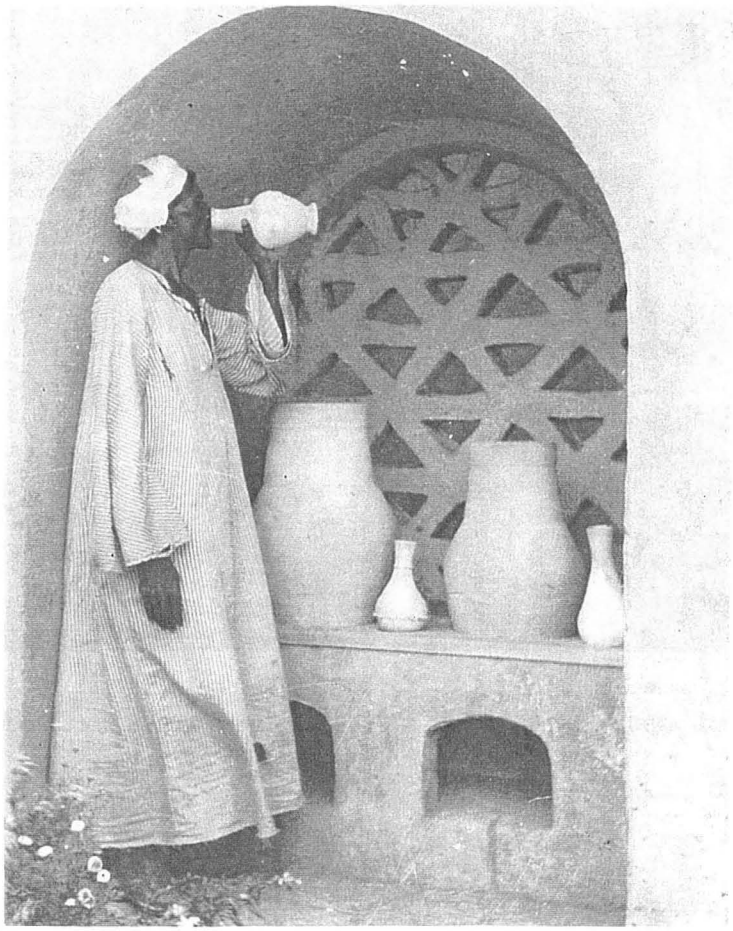
55. New Gourna Village, boy's primary school.



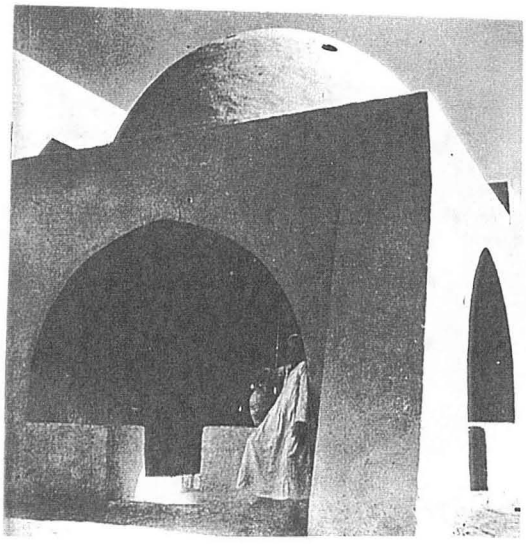
56. New Gourna Village, courtyard of girls' primary school.



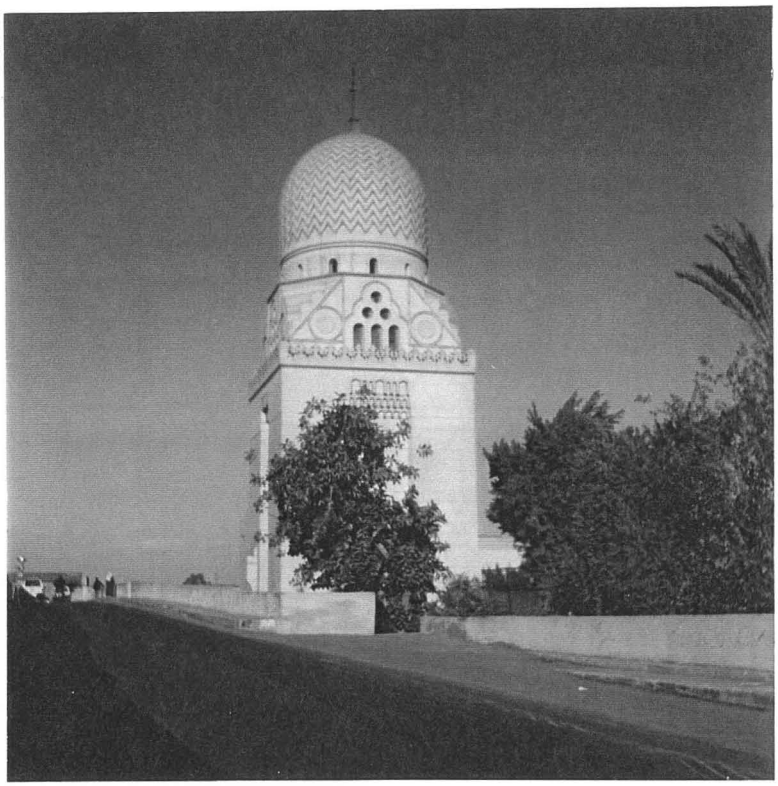
57. New Gourna Village, pigeon tower.



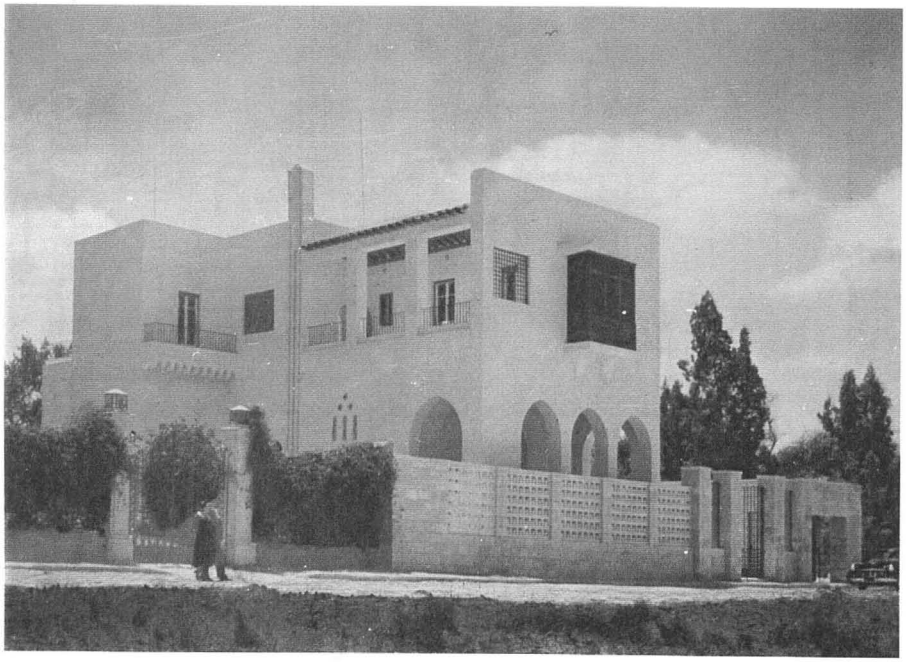
58. New Gourna Village, *Maziara*.



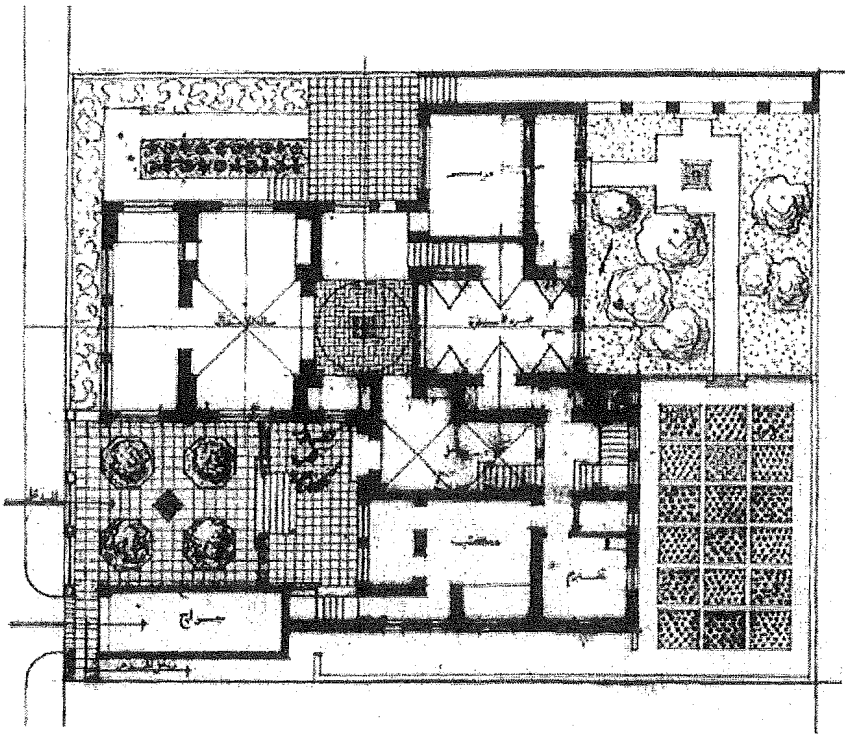
59. New Gourna Village, water point.



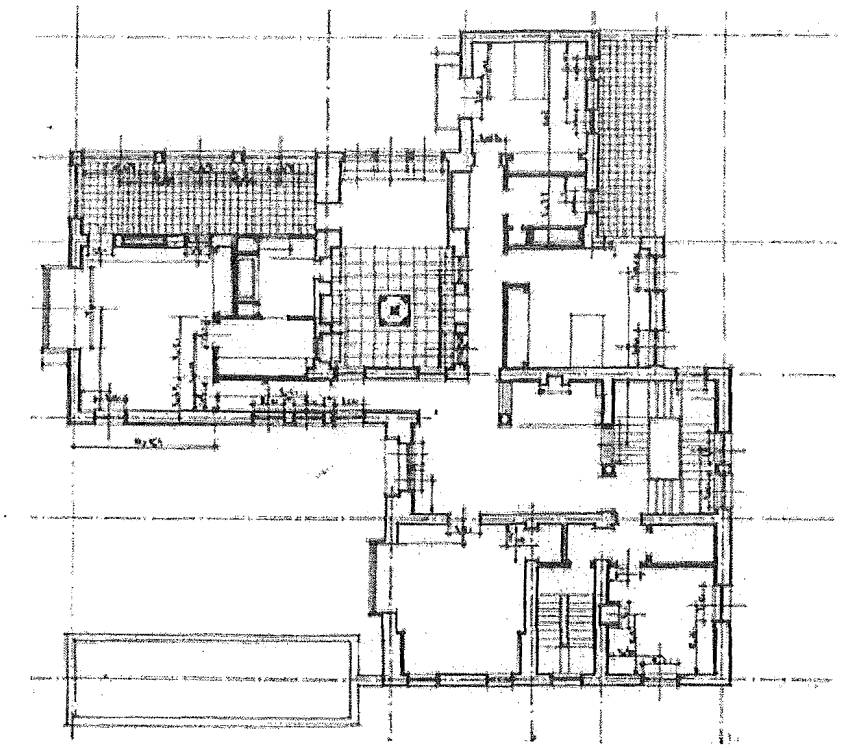
60. Hassanein mausoleum, Salah Salem Street, Cairo, 1946.



61. Abu-Gabal House, Giza, 1947.

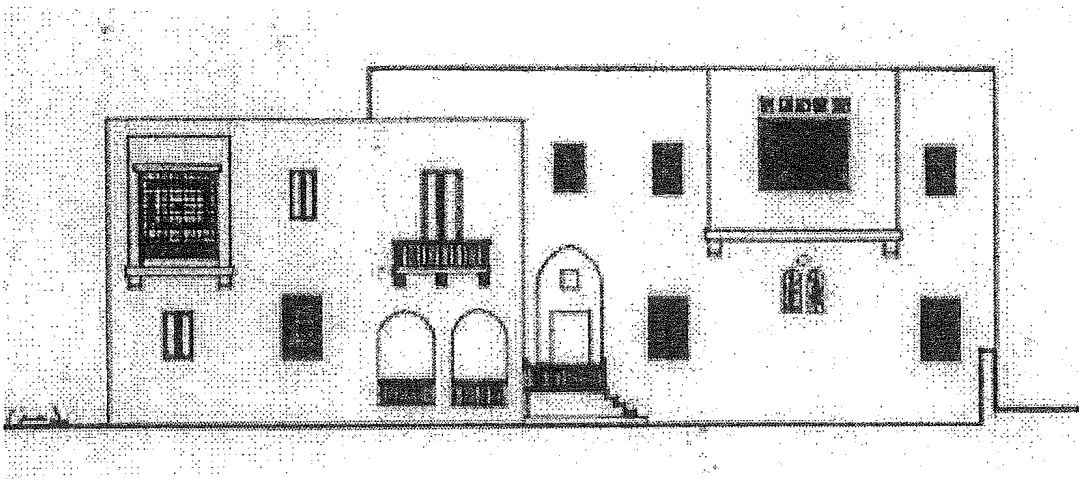


62. Abu-Gabal House, ground floor plan.

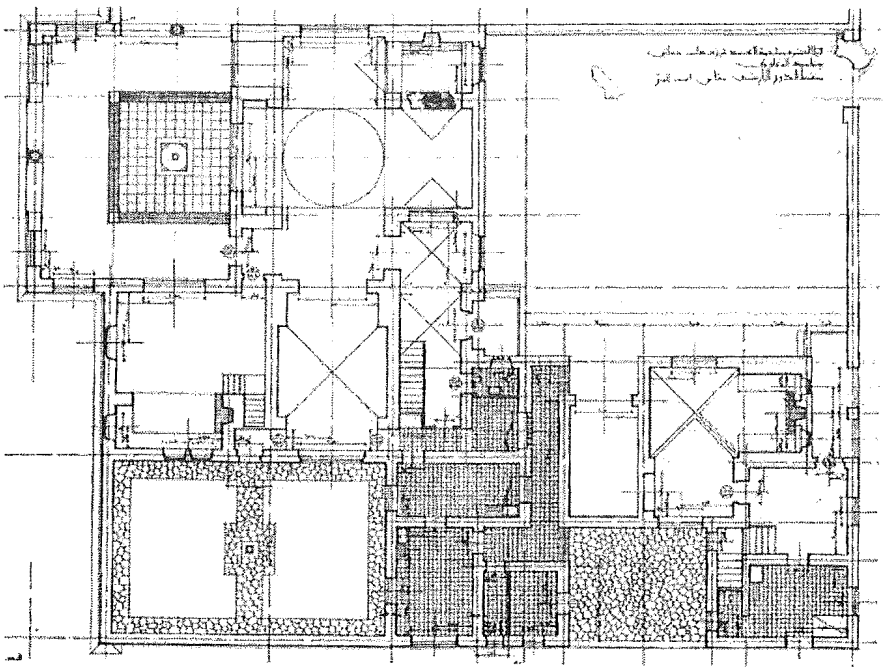


63. Abu-Gabal House, first floor plan.

64. Abu-Gabal House, interior of the reception area.

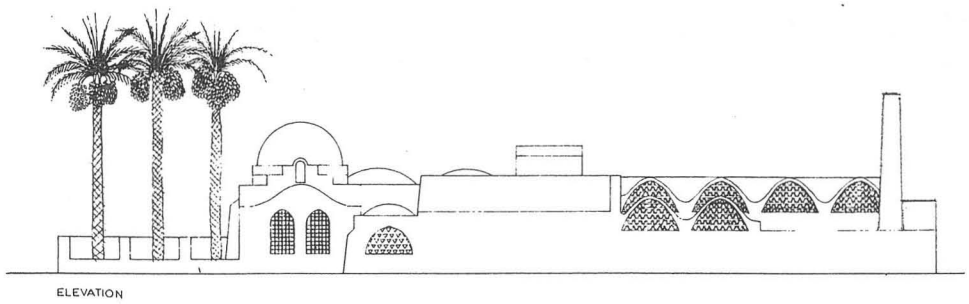


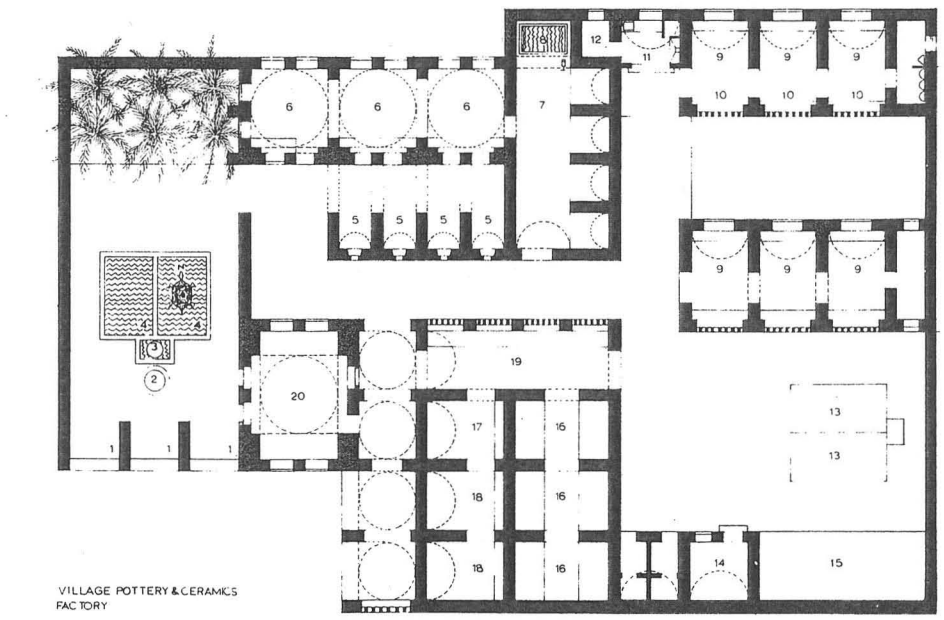
65. Hassanein Villa, Maadi, Cairo, 1949, elevation.



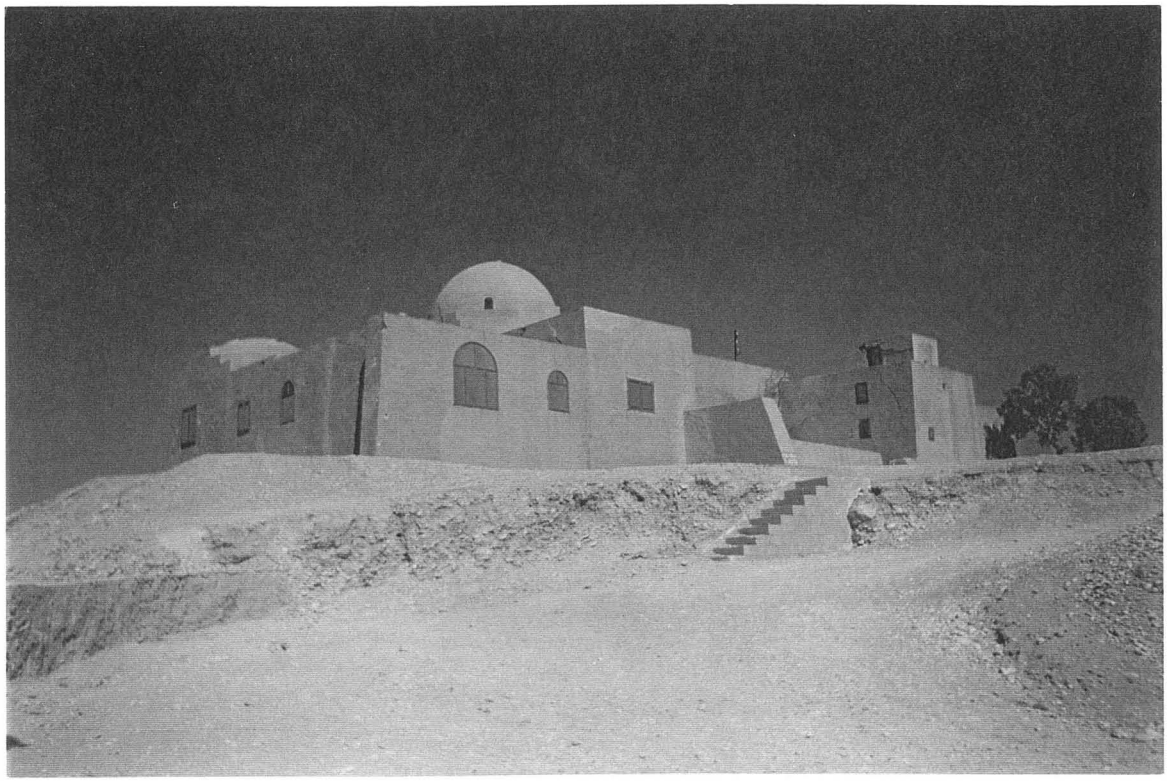
66. Hassanein Villa, plan.

67. Ceramic Factory, Garagus, Qena, 1950.

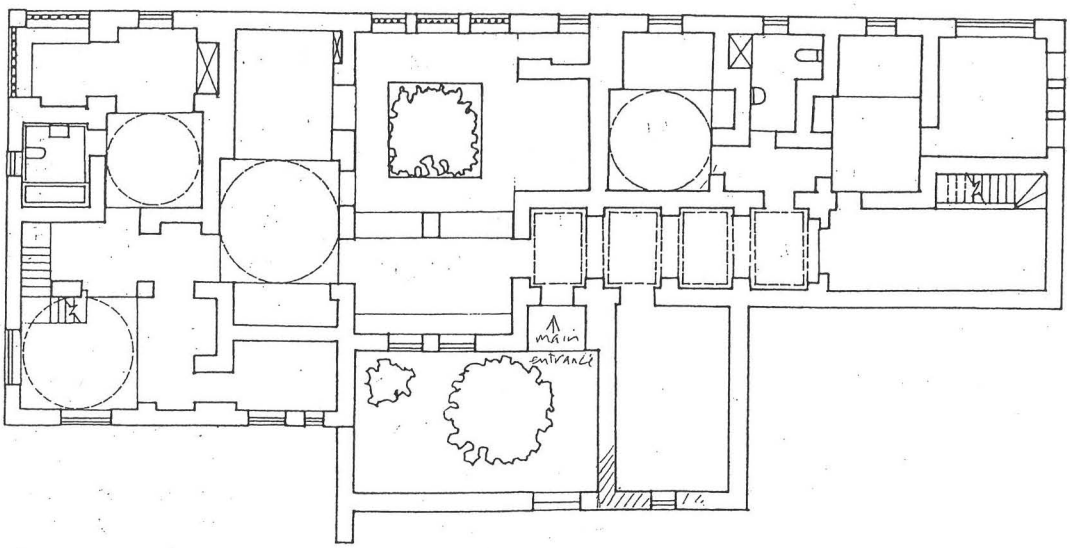




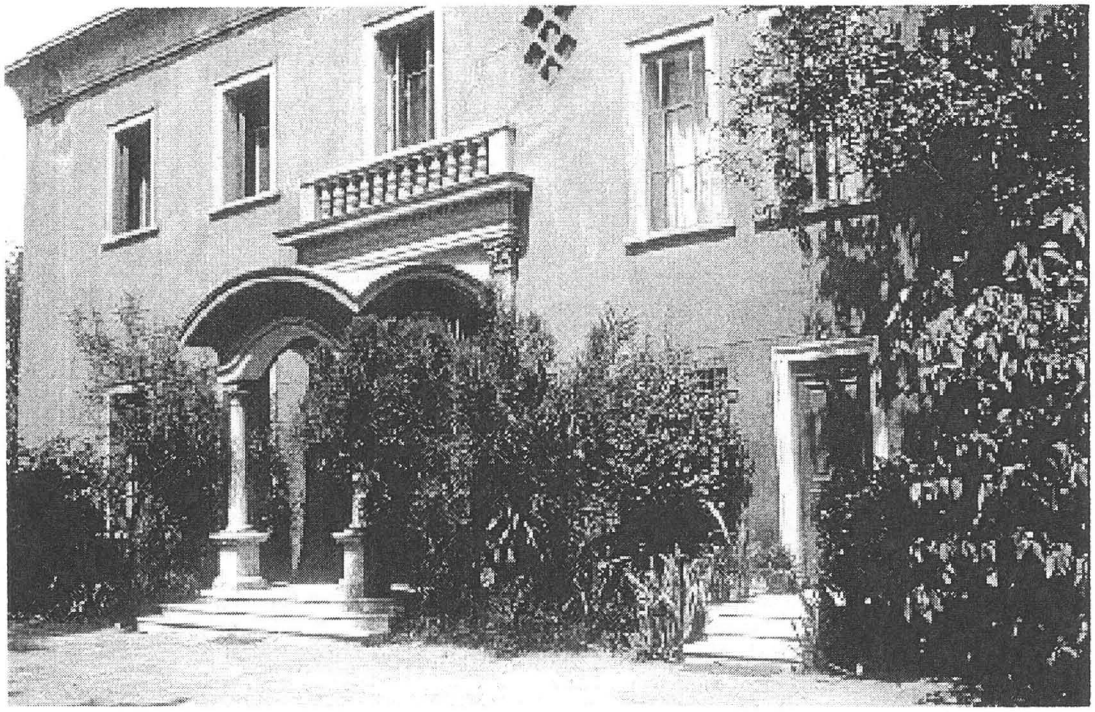
68. Ceramic Factory, plan and elevation.



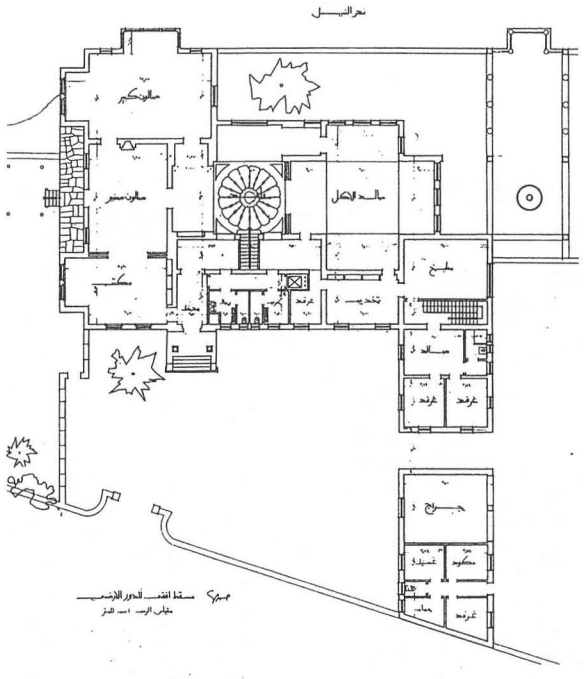
69. Stopplaere House, Luxor, 1950.



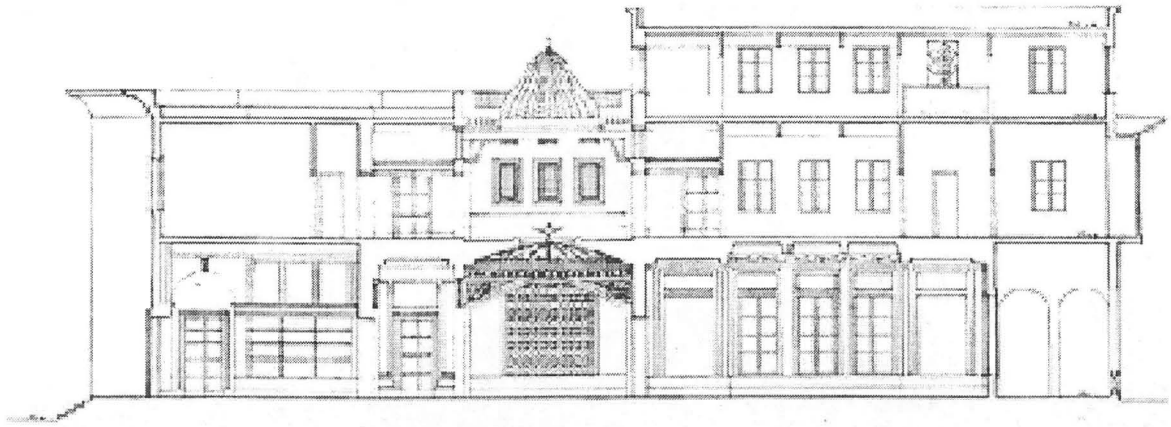
70. Stopplaere House, plan.



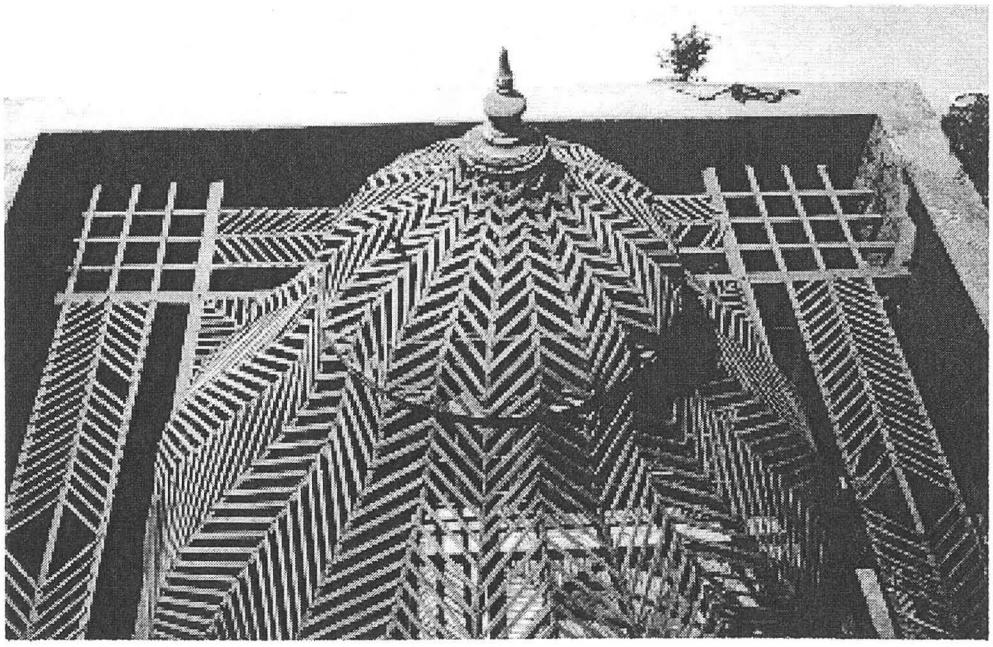
71. Monastirli House, Giza, 1950.



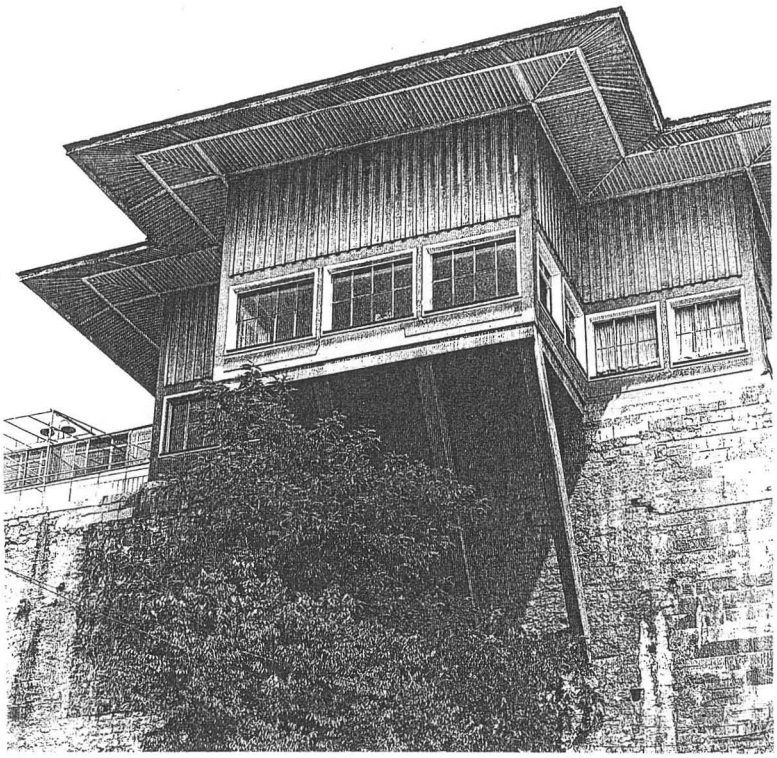
72. Monastirli House, plan.



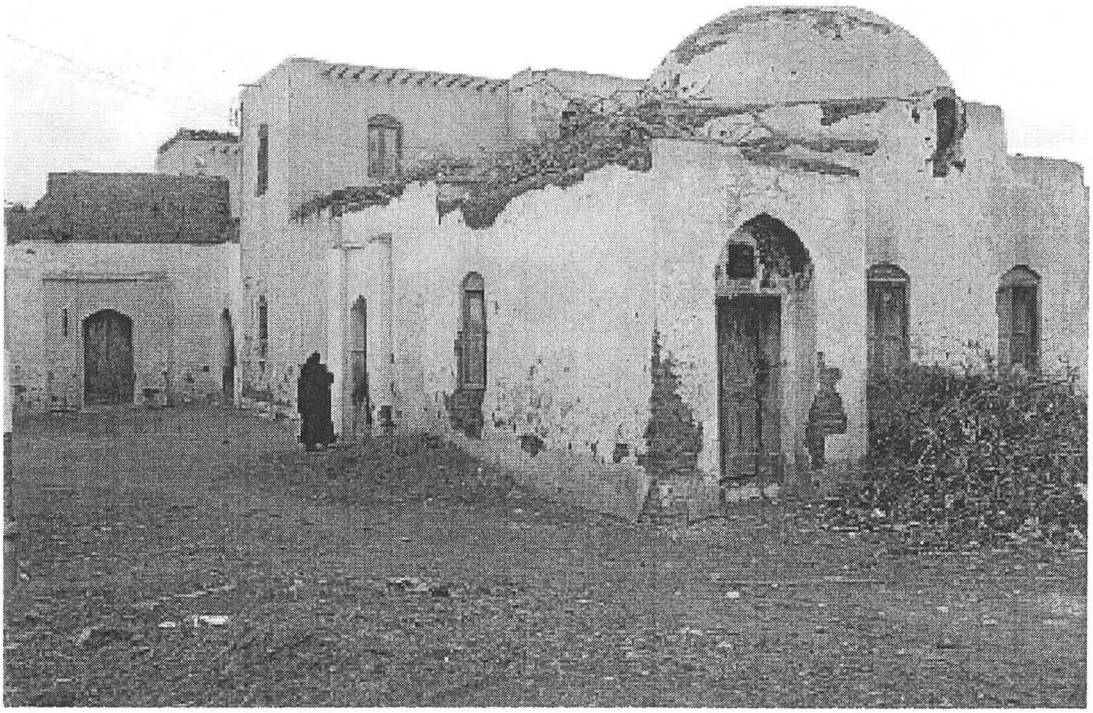
73. Monastirli House, cross section.



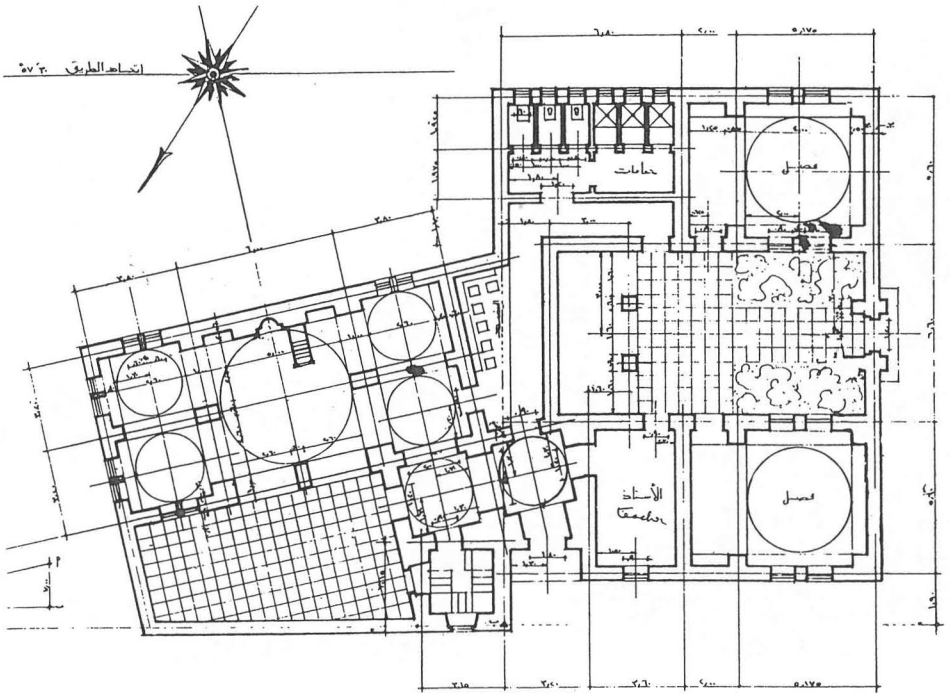
74. Monastirli House, pergola.



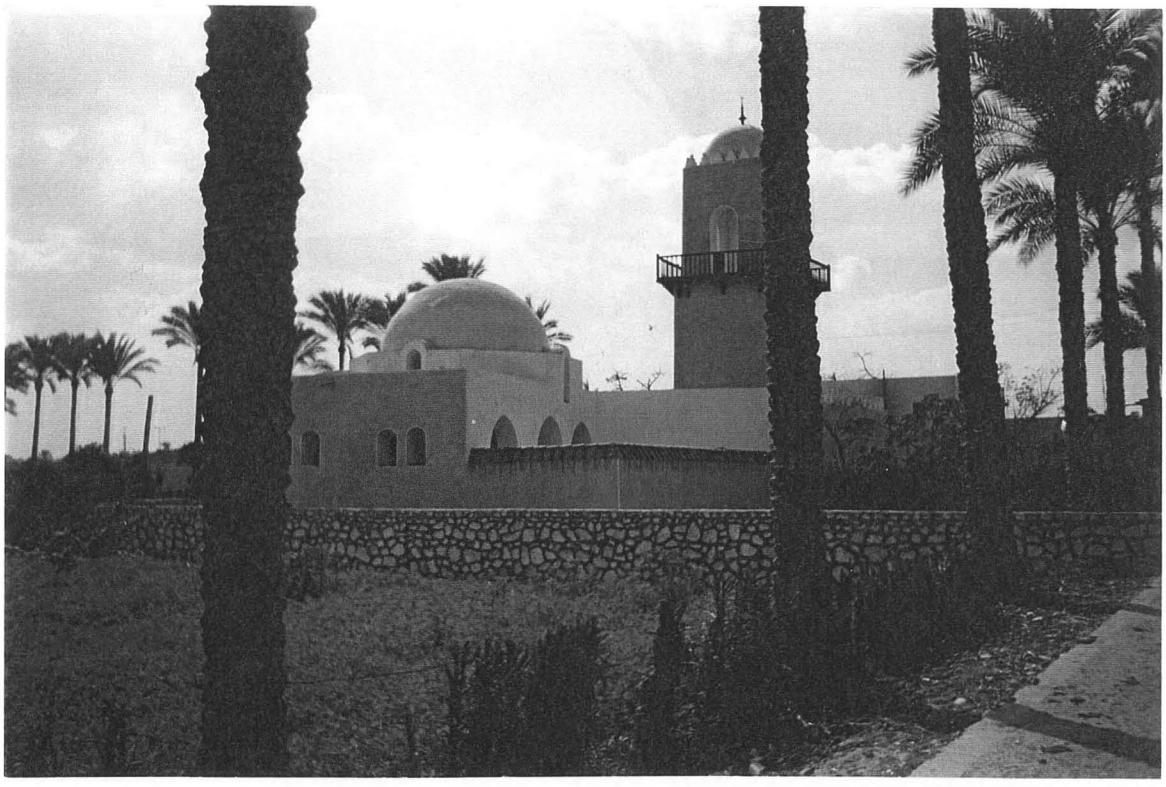
75. Taşlik Coffee House, Istanbul, (1947-1948), by Sedad Hakki Eldem.



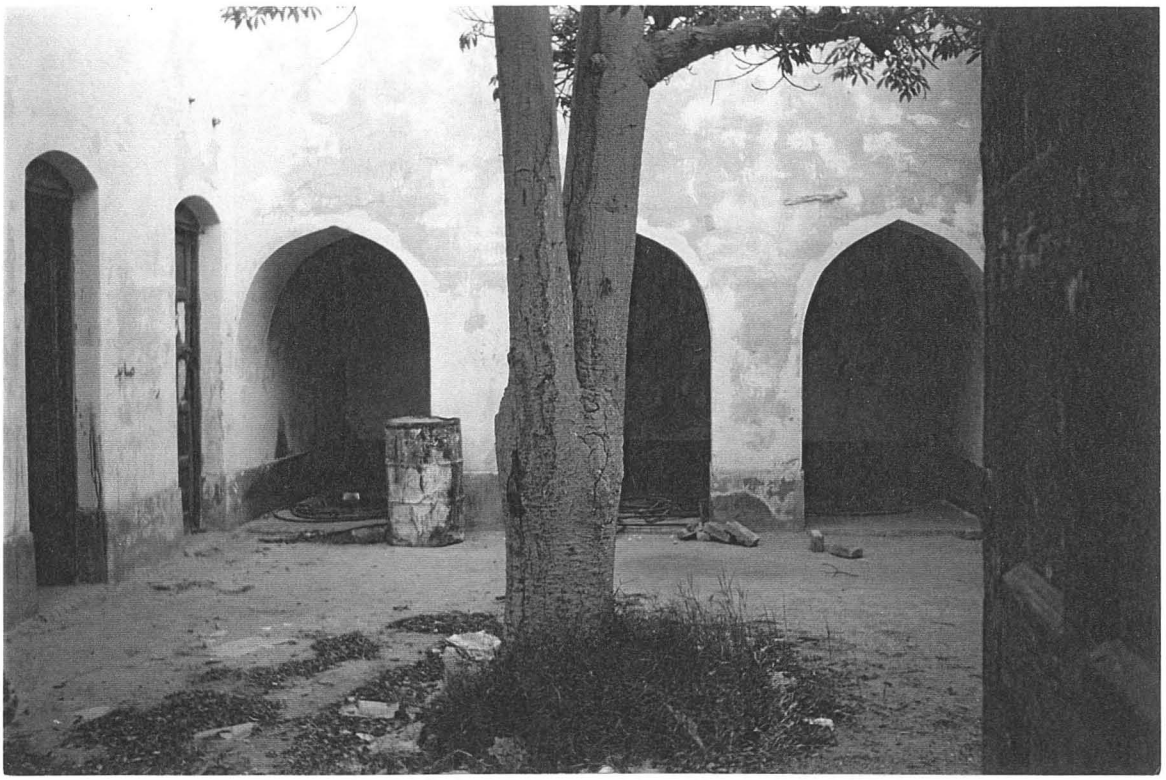
76. Lulu'at Al-Sahara Village, Al-Monsoriya, 1950, housing.



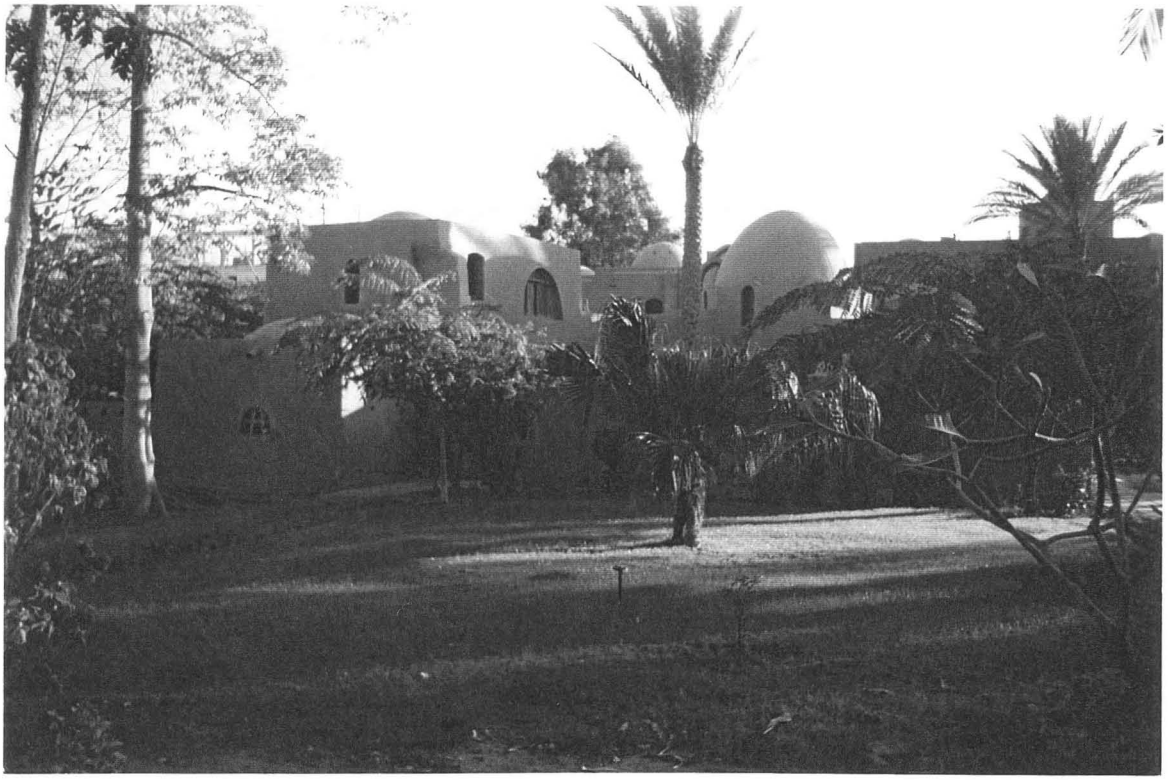
77. Lulu'at Al-Sahara Village, plan.



78. Lulu'at Al-Sahara Village, mosque.

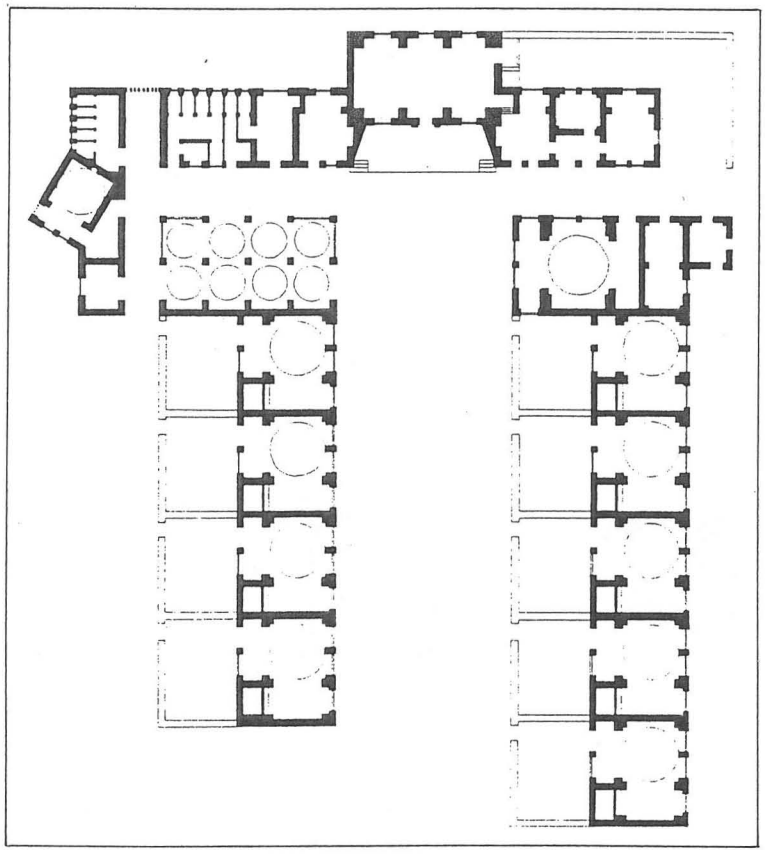


79. Lulu'at Al-Sahara Village, school courtyard.

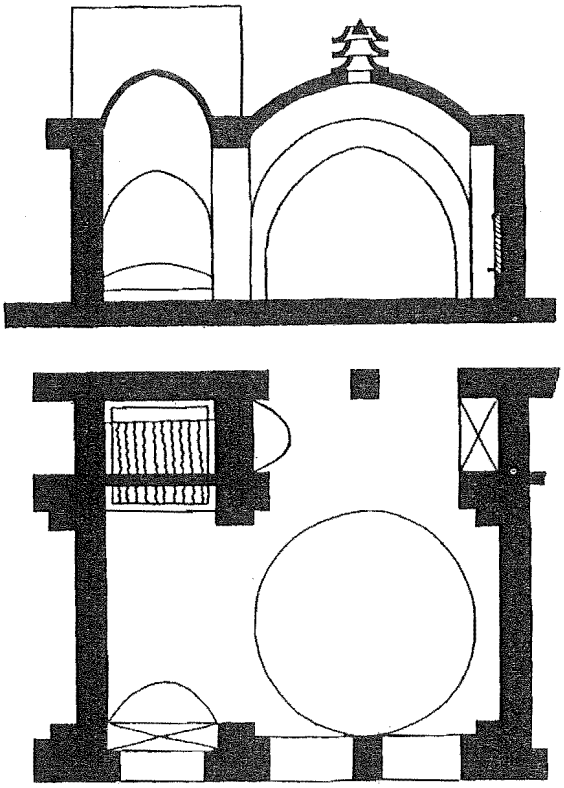


80. Wassef Weaving Centre, Harraniya, Giza, 1952, by Ramses Wissa Wassef.

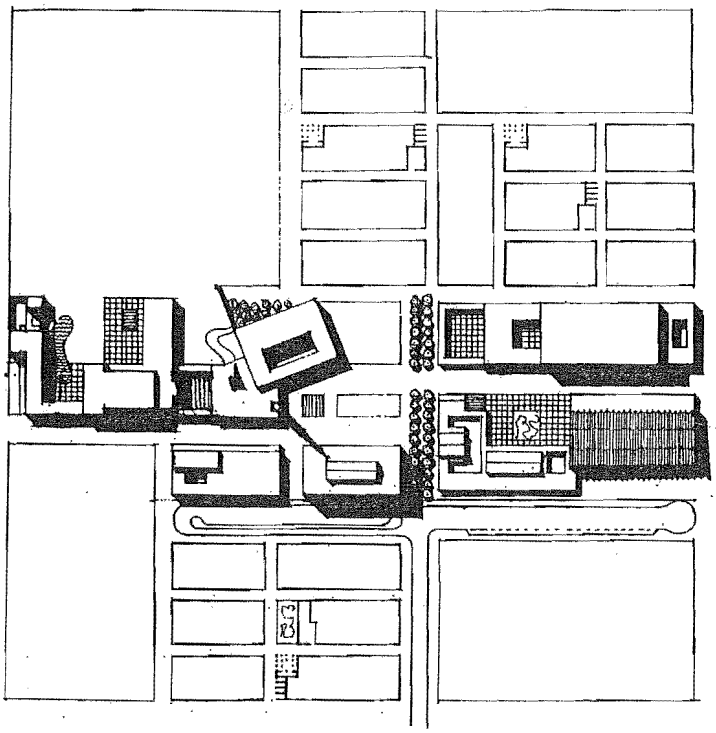
81. Fares Primary School, Fares village, Upper Egypt, 1957.



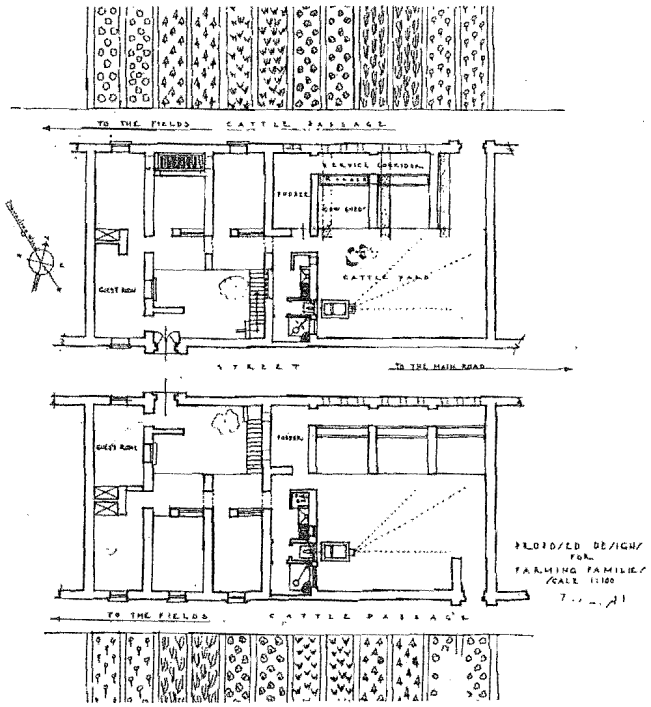
82. Fares Primary School, plan.



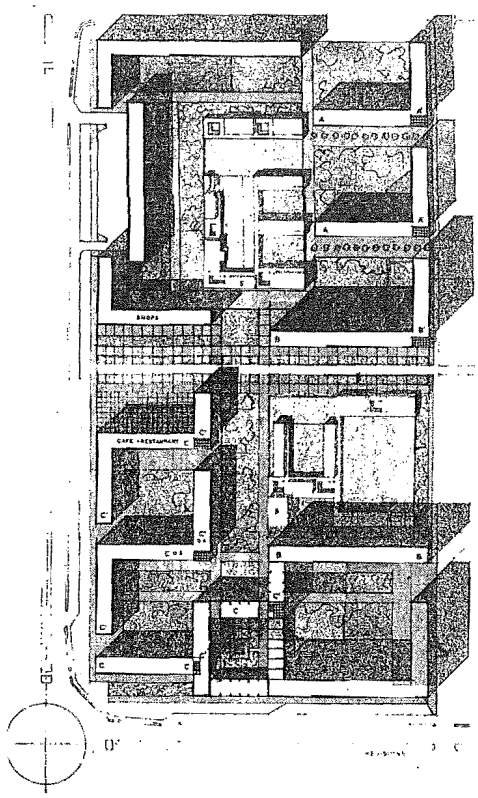
83. Fares Primary School, plan and cross section of classroom.



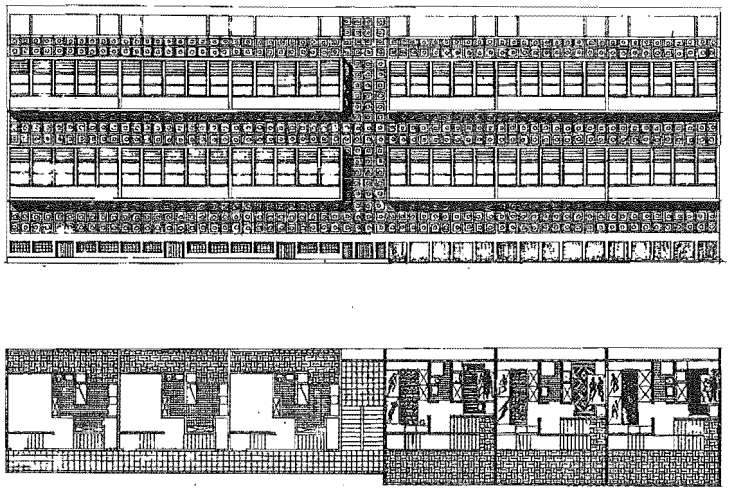
84. Iraq Housing Programme, Greater Mussayib, Iraq, 1958, site plan.



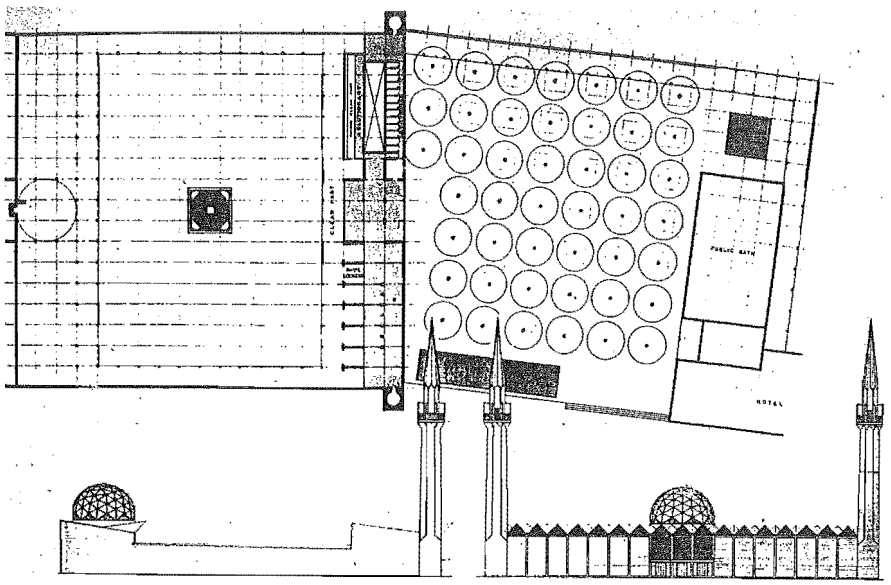
85. Iraq Housing Programme, farmers' unit plans.



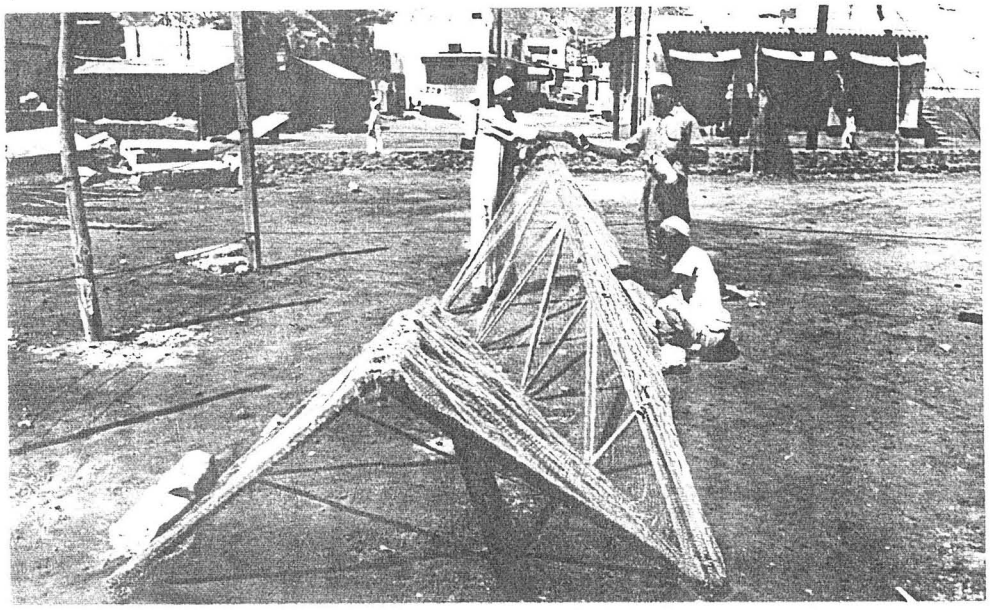
86. Iraq Housing Programme, non-farmer neighbourhood.



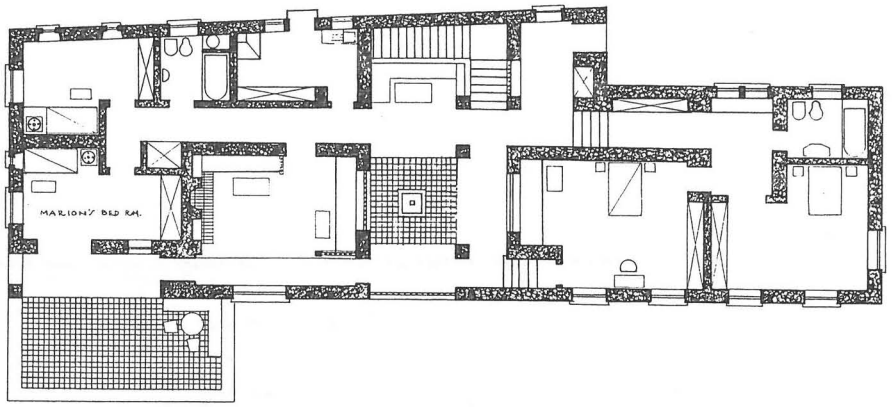
87. Iraq Housing Programme, block plan and elevation.



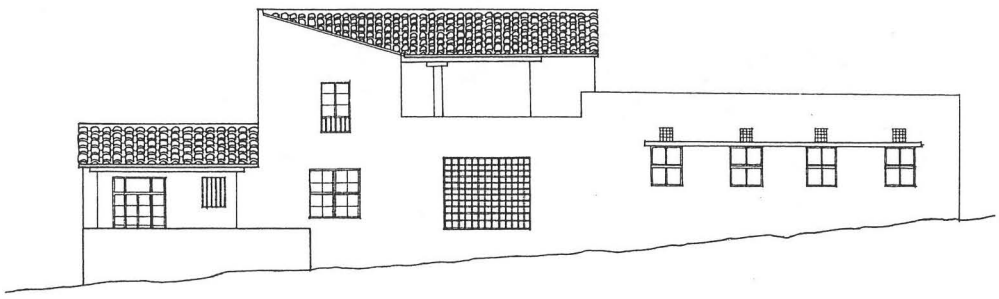
88. Pakistan Mosque, Punjab, Pakistan, 1960, plan and elevations.



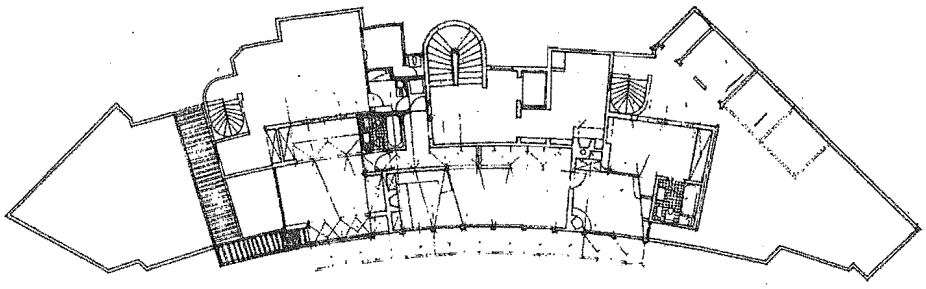
89. Baratsi Truss experiment.



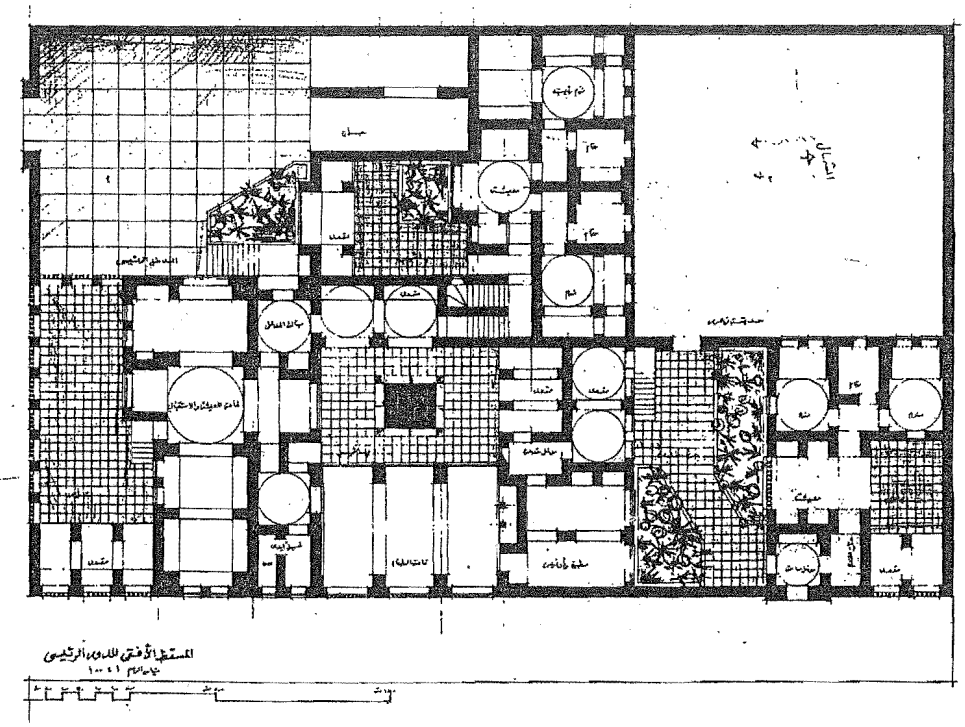
90. Carr House, Athens, Greece, 1962, plan.



91. Carr House, elevation.



92. Ali Fathy Apartment, (unknown location), 1960, plan.

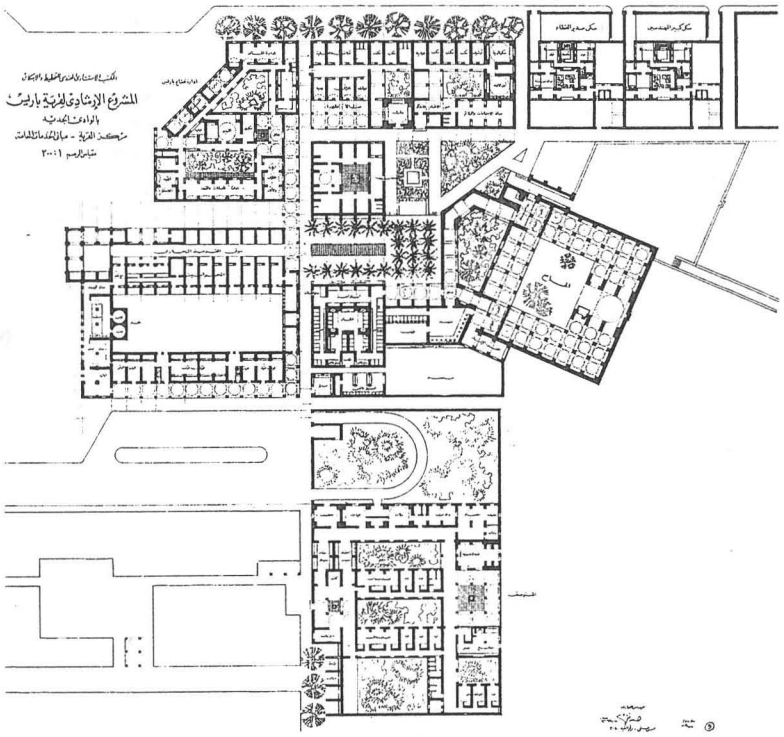


93. Ambassador Villa, Niamey, Nigeria, 1960, plan.

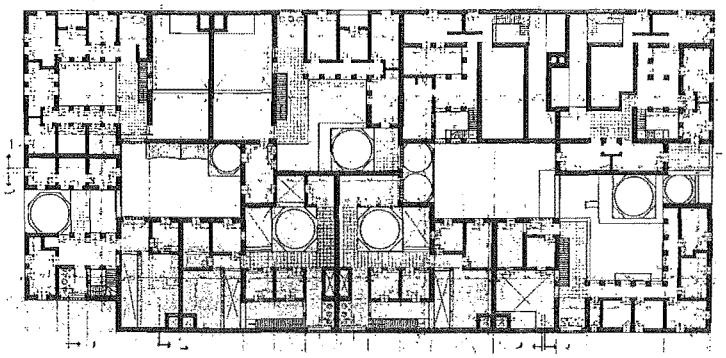
94. Hassan Fathy House, 18th century Mamluk house, Cairo.

95. Hassan Fathy House, living room.

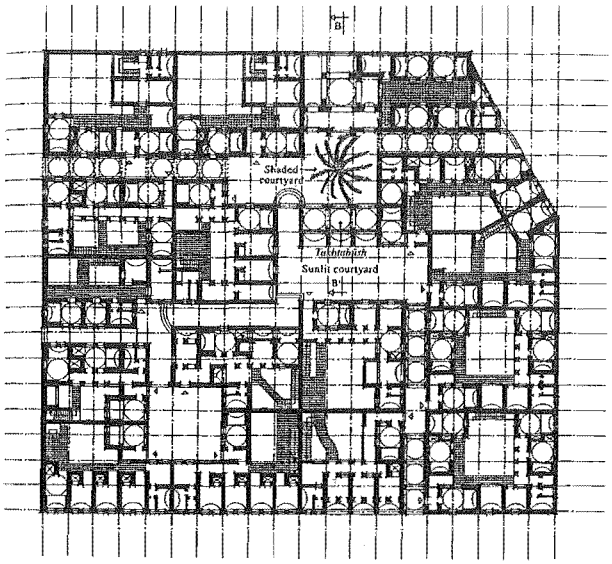
96. New Valley Training Centre, Kharga Oasis, 1962.

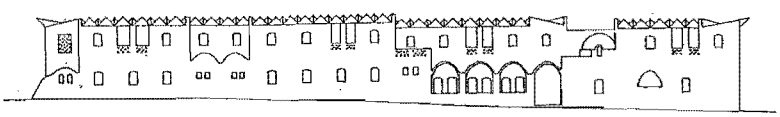


97. New Bariz Village, Kharga Oasis, (1964-1967), layout of town centre.

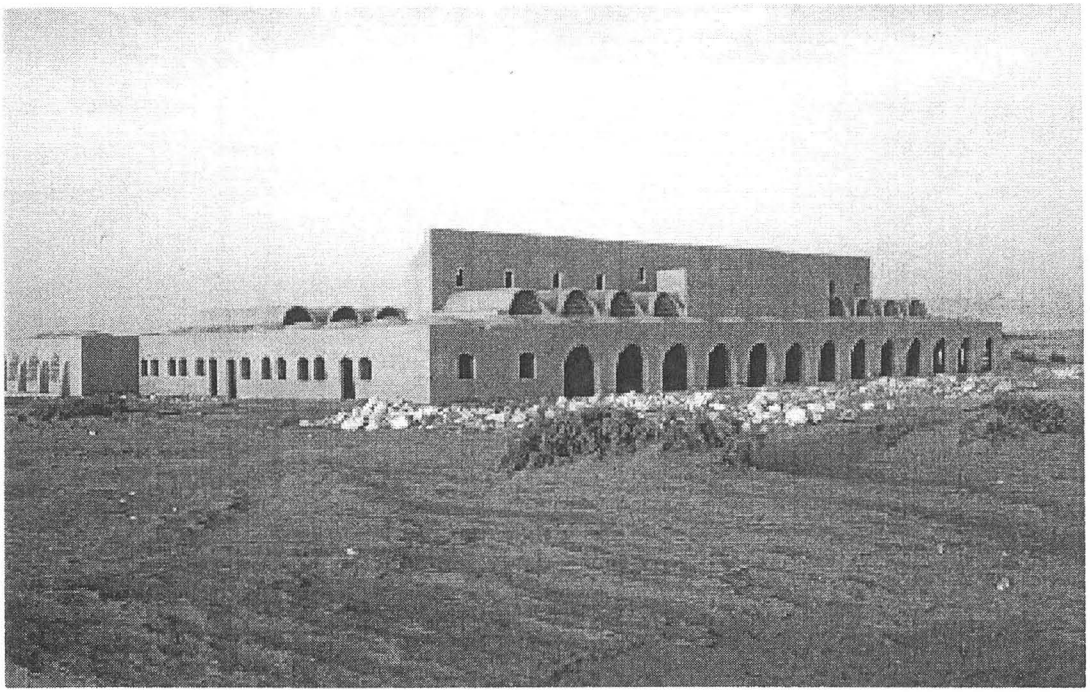


98. New Bariz Village, farmer block plan.

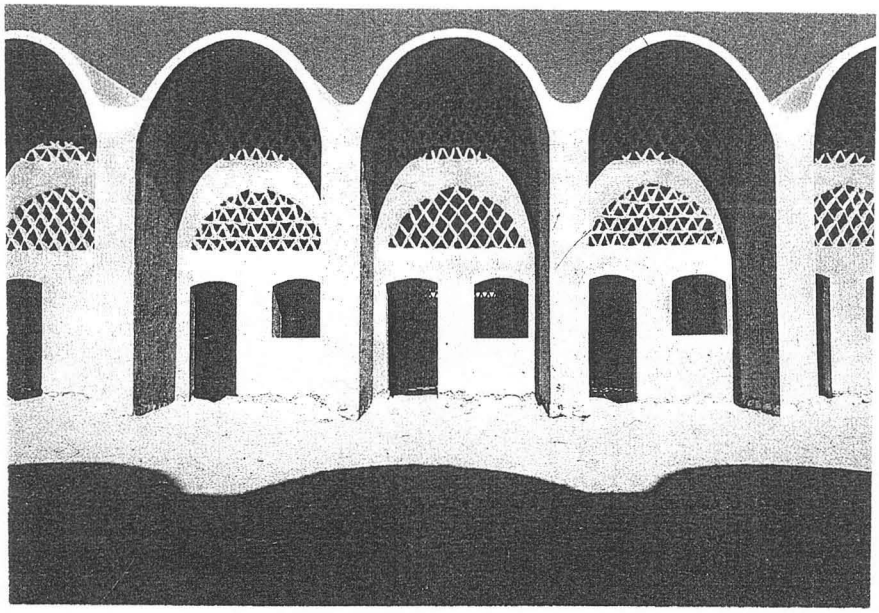




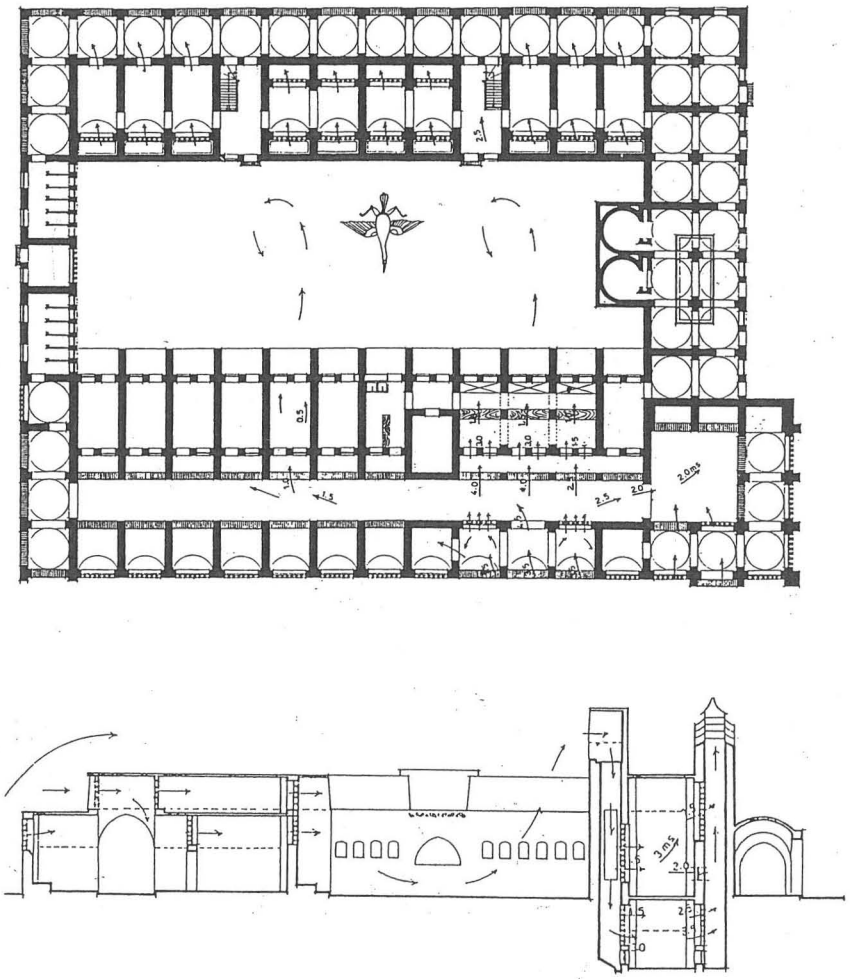
99. New Bariz Village, non-farmer neighbourhood's plan and elevation.



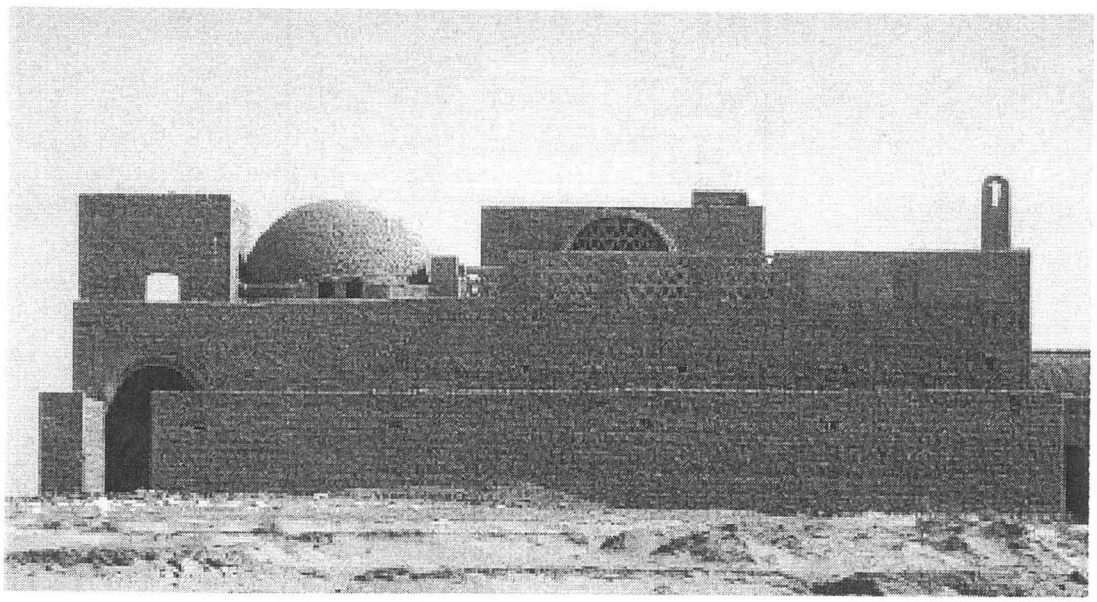
100. New Bariz Village, market.



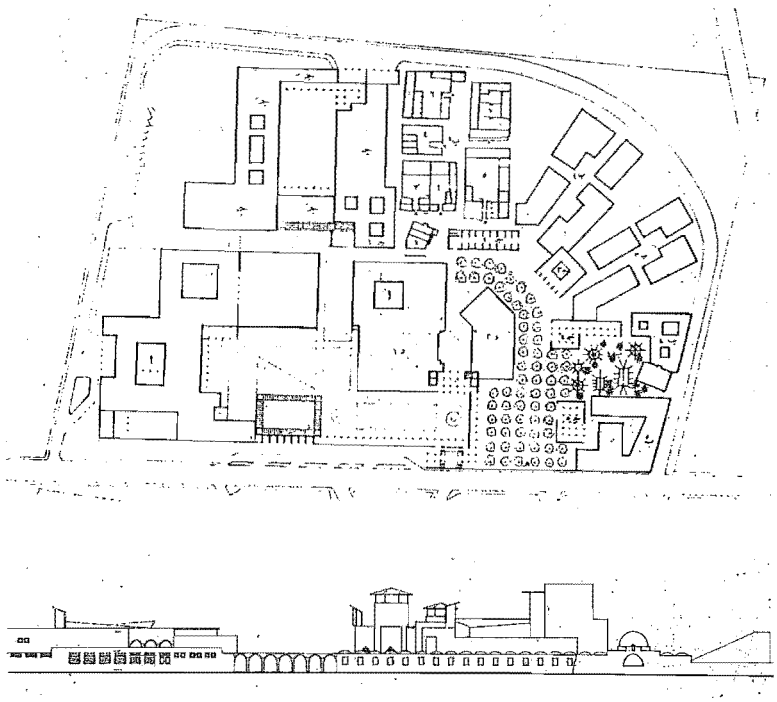
101. New Bariz Village, market courtyard.



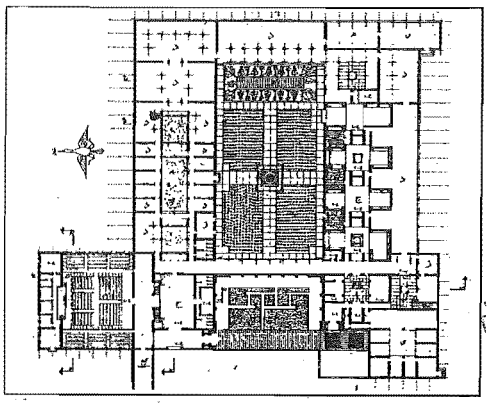
102. New Bariz Village, market's plan and cross section.



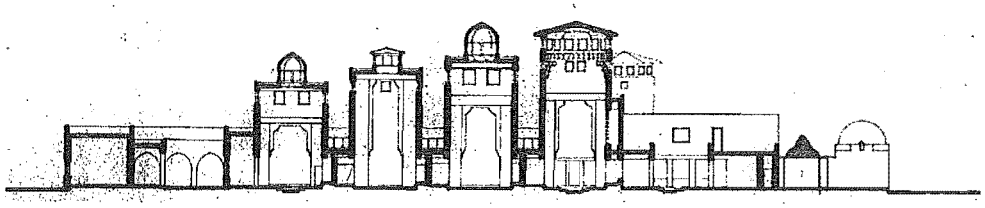
103. New Bariz Village, administrator's villa.



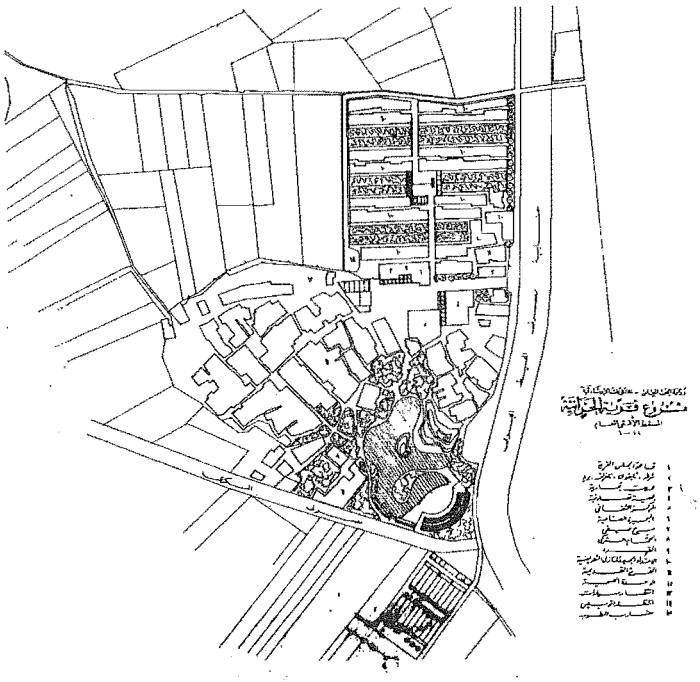
104. High Institute of Social Anthropology and Folk Art, Abu Al-Rich, Aswan, 1965, master's plan and elevation.



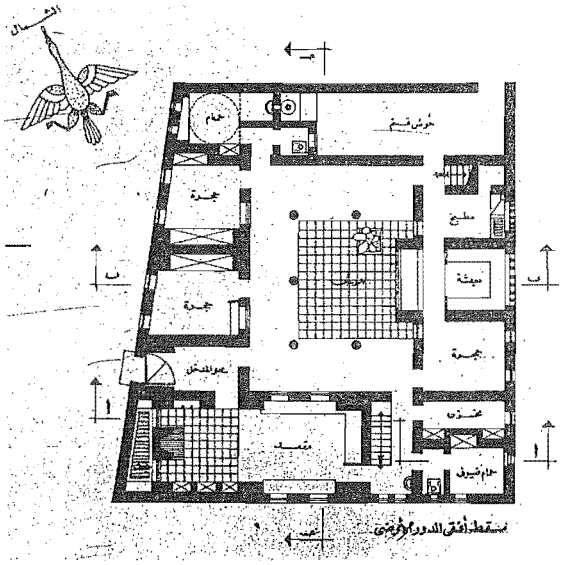
105. High Institute of Social Anthropology and Folk Art, museum plan.



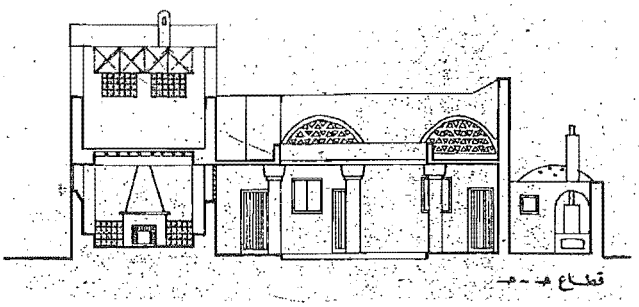
106. High Institute of Social Anthropology and Folk Art, museum cross section.



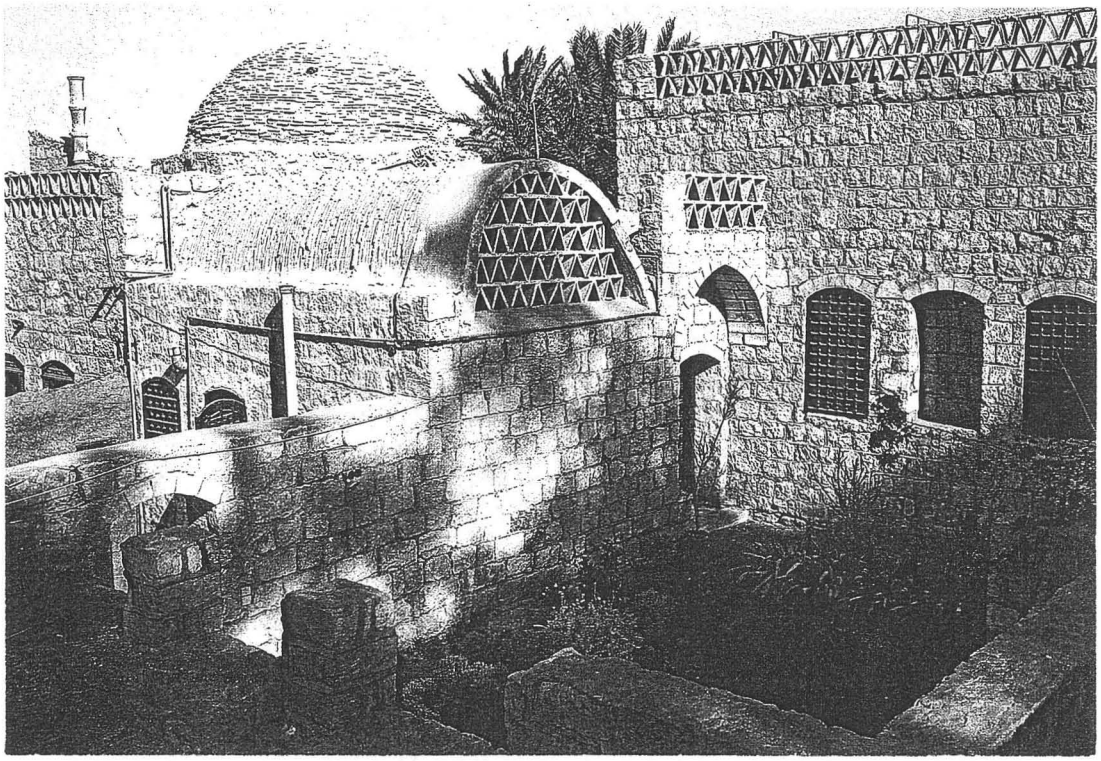
107. Harraniya Village, Giza, 1964, master plan.



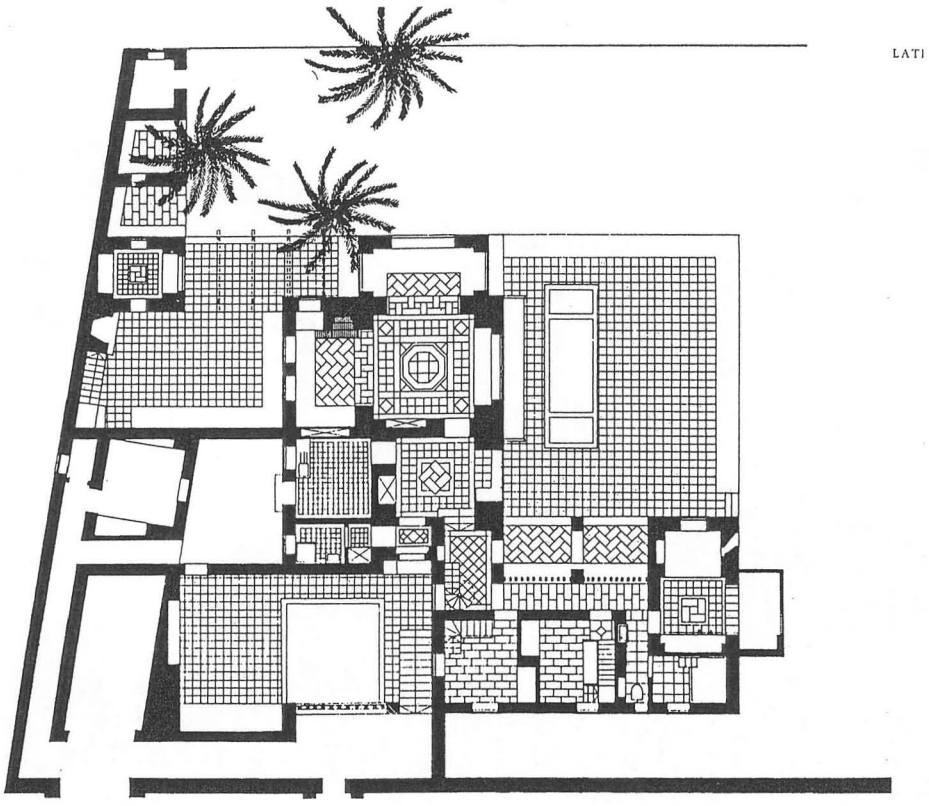
108. Al-Dariya Housing, Al-Dariya, Saudi Arabia, 1966, unit plan.



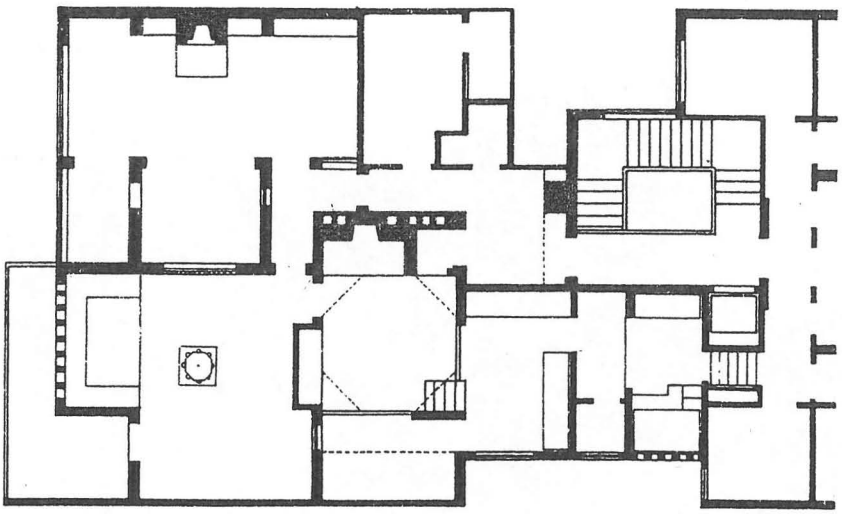
109. Al-Dariya Housing, cross section.



110. Riad House, Shabramant, Giza, 1967.



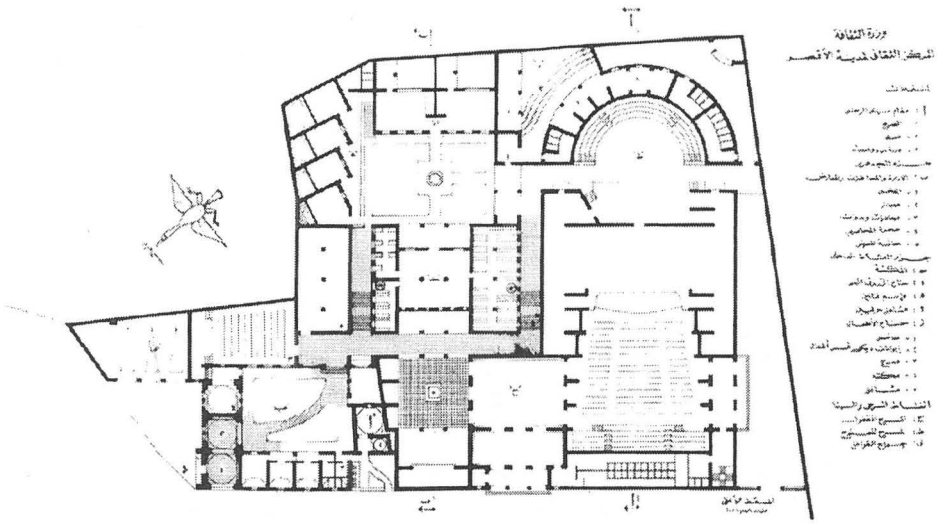
111. Riad House, plan.



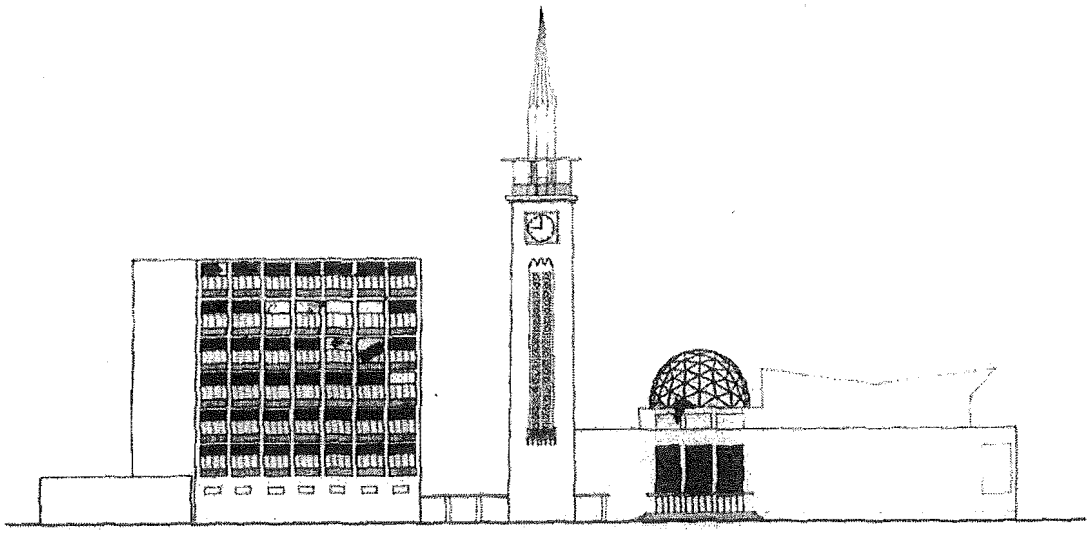
112. Mehrez Apartment, Cairo, 1967, plan,
showing apartment only.

113. Mehrez Apartment, living area.

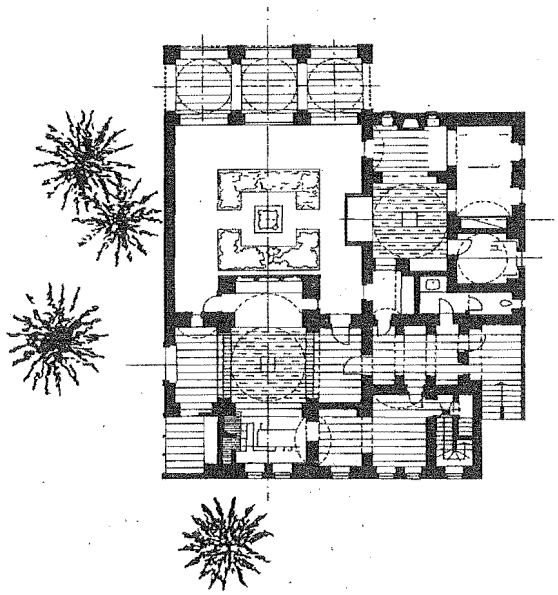
114. Luxor Cultural Centre, Luxor, 1970.



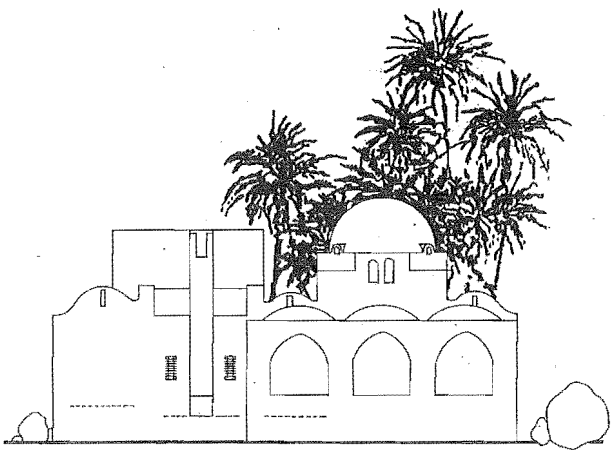
115. Luxor Cultural Centre, plan.



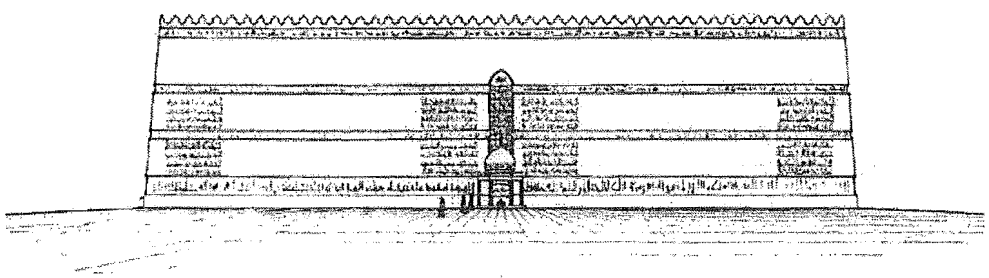
116. Mosque and Conference Centre, Khartoum, Sudan, 1970, elevation.



117. Sadruddin Aga Khan House, Aswan,1970, plan.

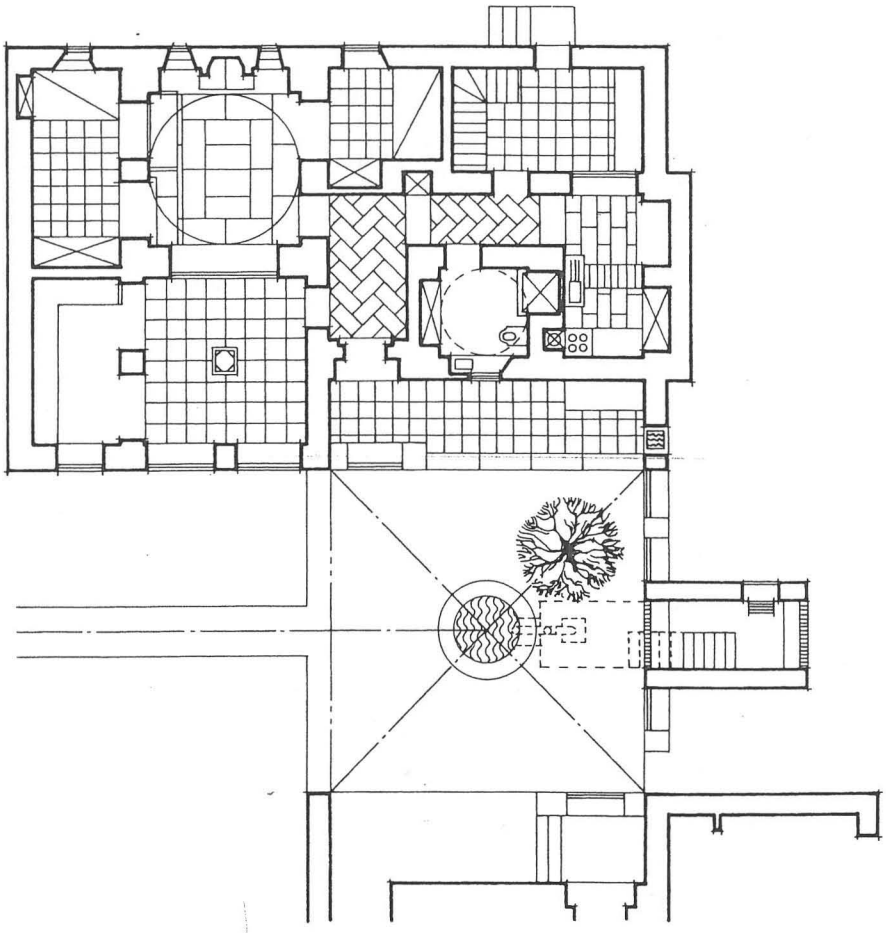


118. Sadruddin Aga Khan House, elevation.

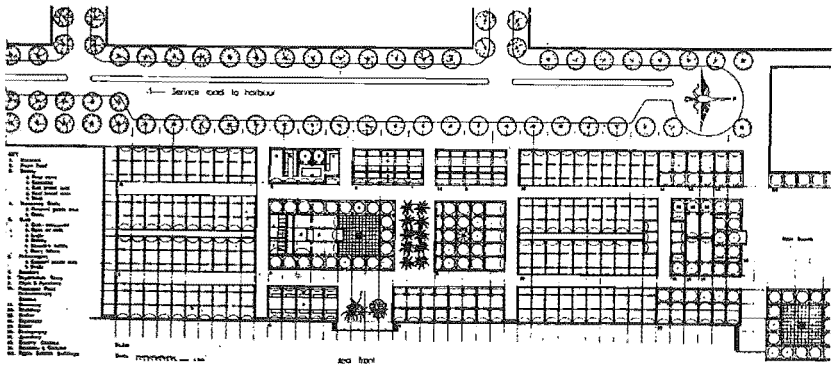


119. President Naser Mausoleum, Cairo, 1971, elevation.

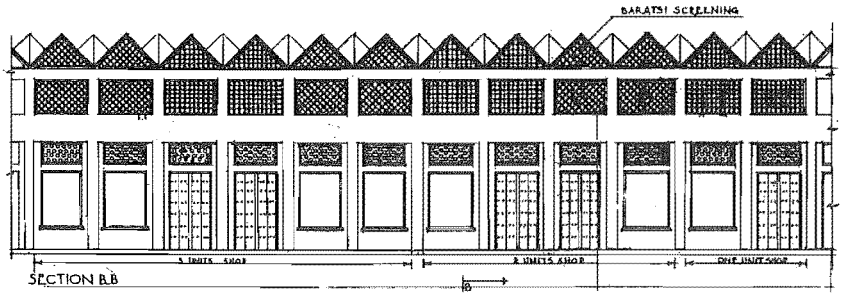
120. Hassan Fathy House, Sidi Krier, North Coast, 1971.



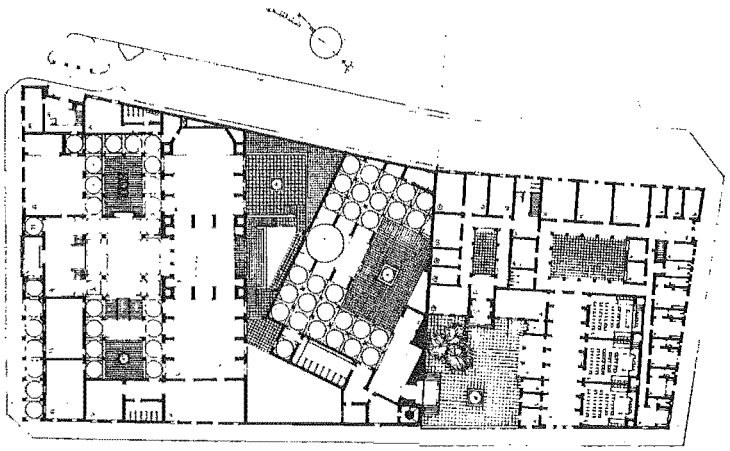
121. Hassan Fathy House, plan.



122. Sohar Remodelling, Sohar, Sultanate of Oman, 1973, market plan.

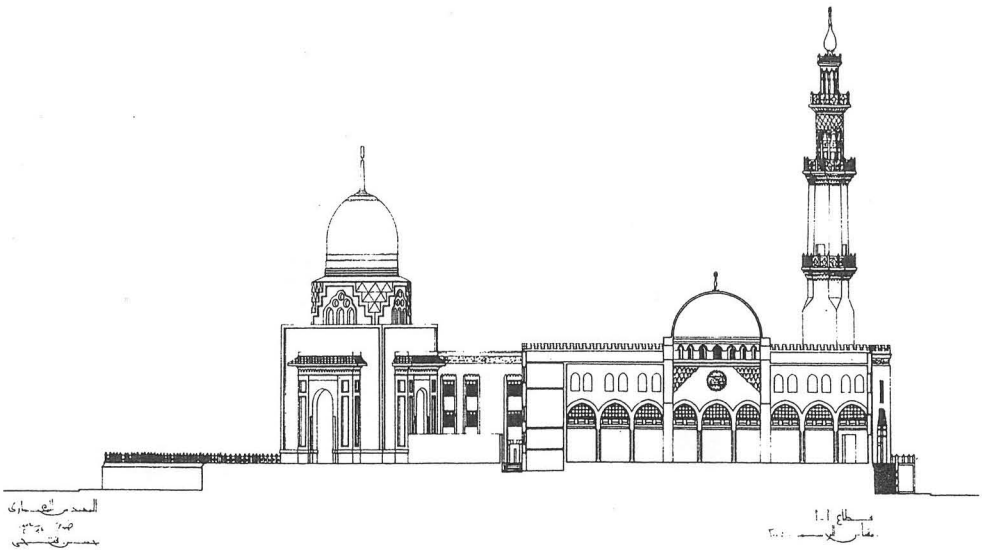


123. Sohar Remodelling, market elevation.

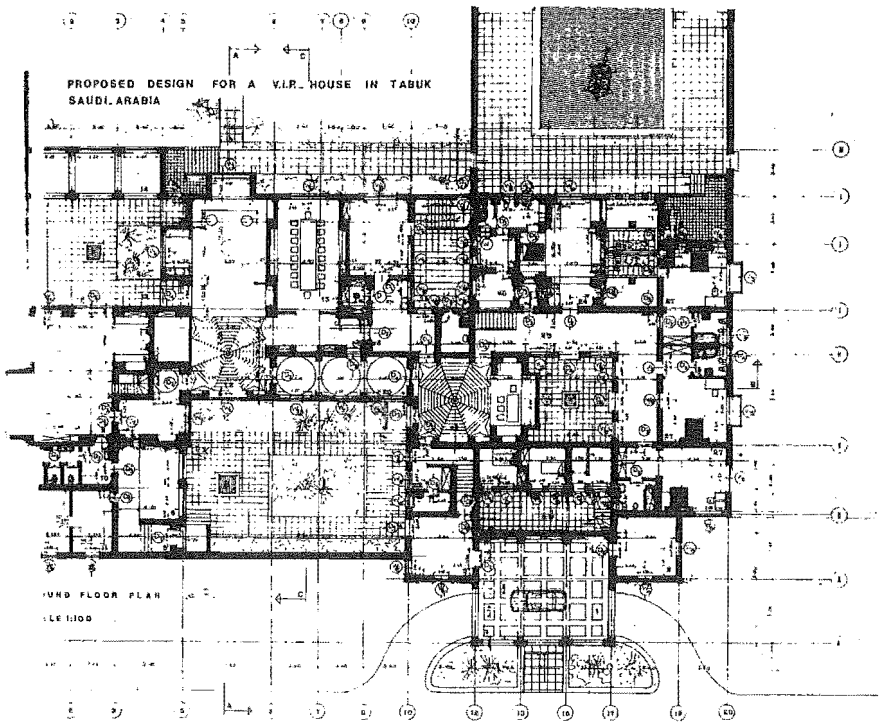


124. Islamic Centre, Tripoli, Lebanon, 1974, plan.

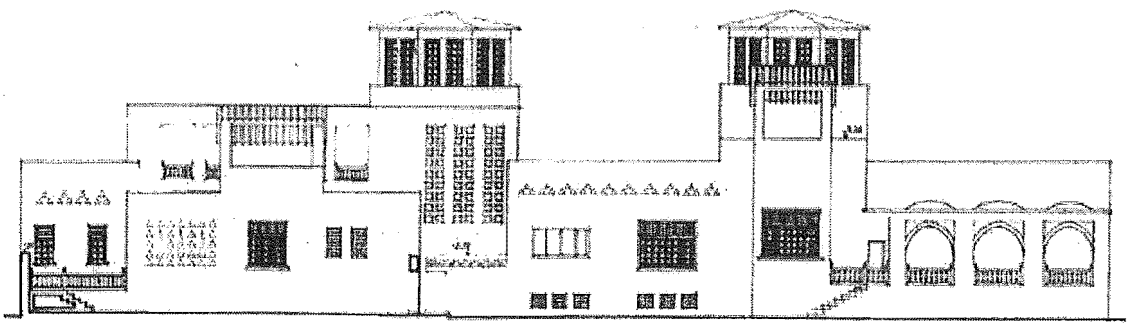
125. Al-Wehda Mosque and Islamic Centre, Abbasia, Cairo, 1974.



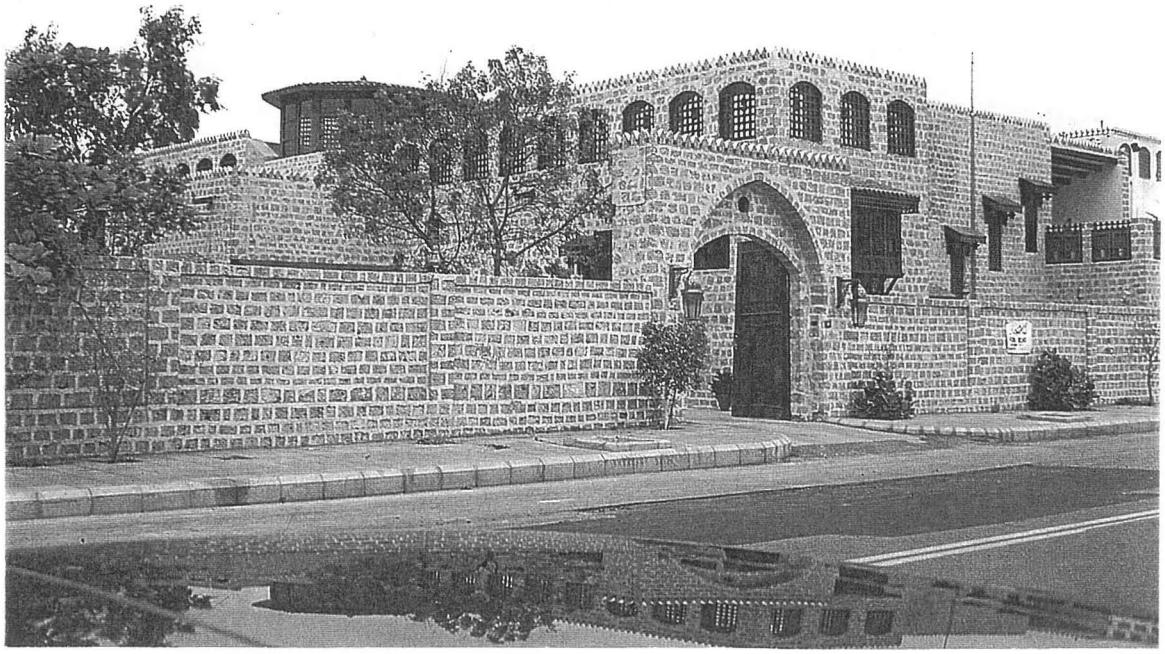
126. Al-Wehda Mosque and Islamic Centre, cross section.



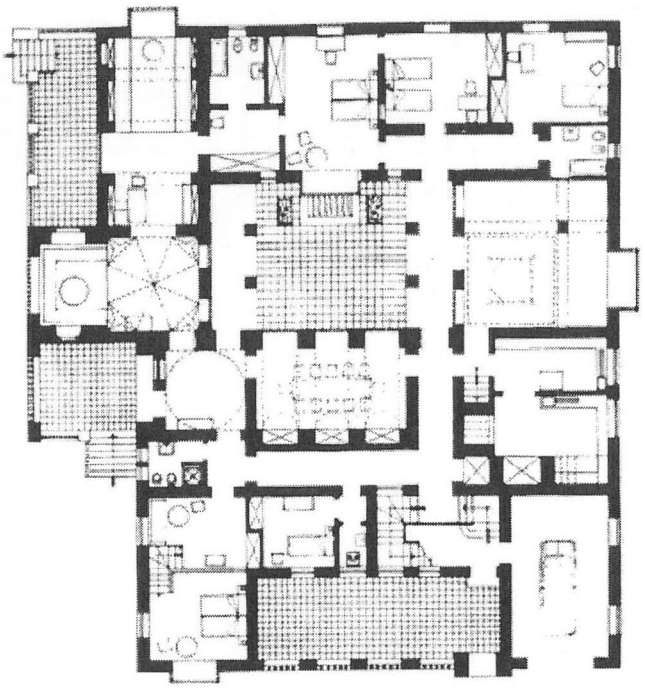
127. V.I.P. House, Tabuk, Saudi Arabia, 1974, plan.



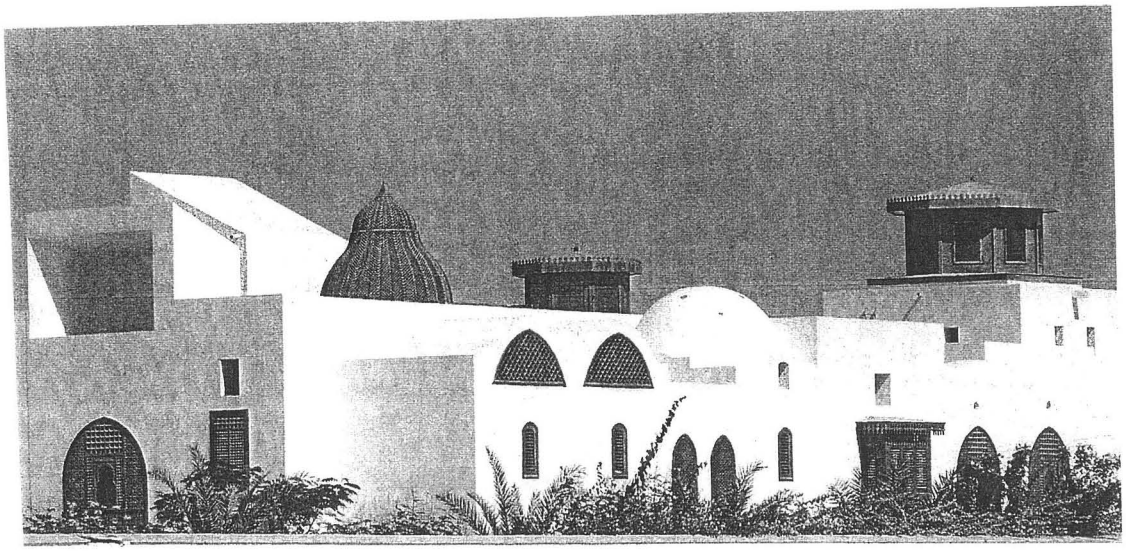
128. V.I.P. House, elevation.



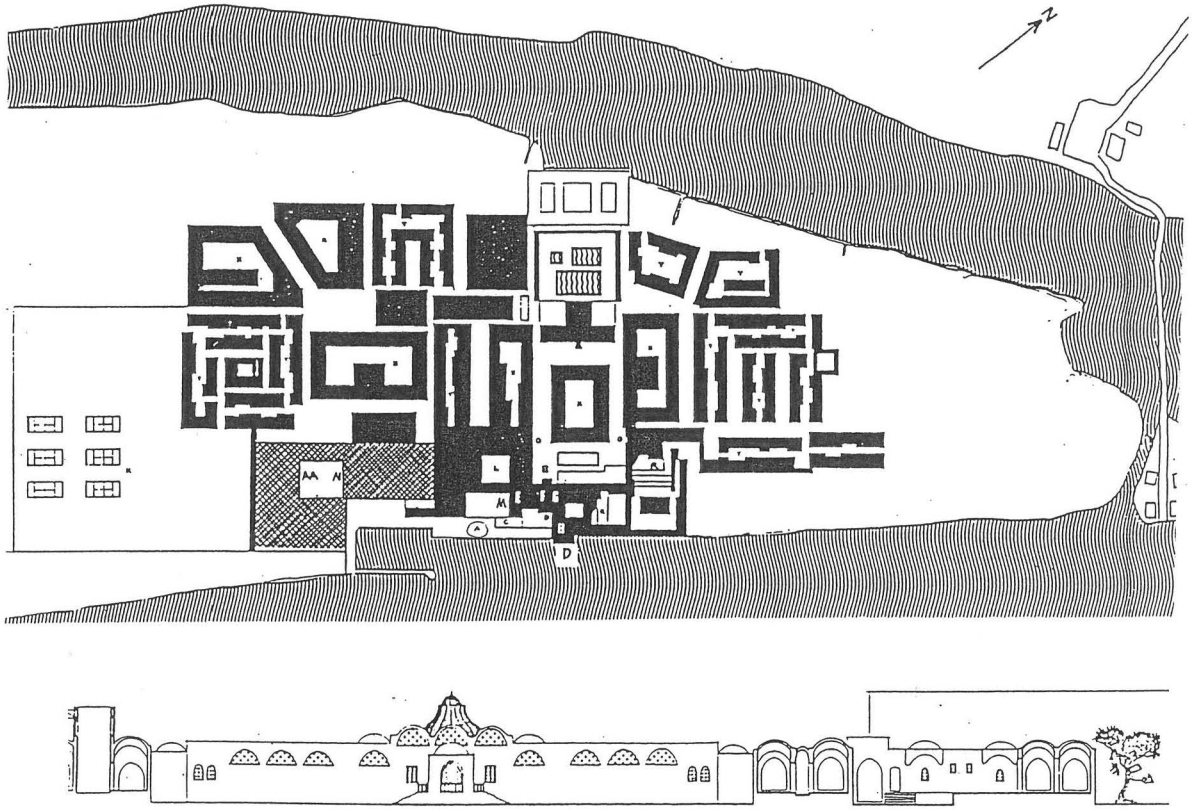
129. Nassif House, Jeddah, Saudi Arabia, 1974.



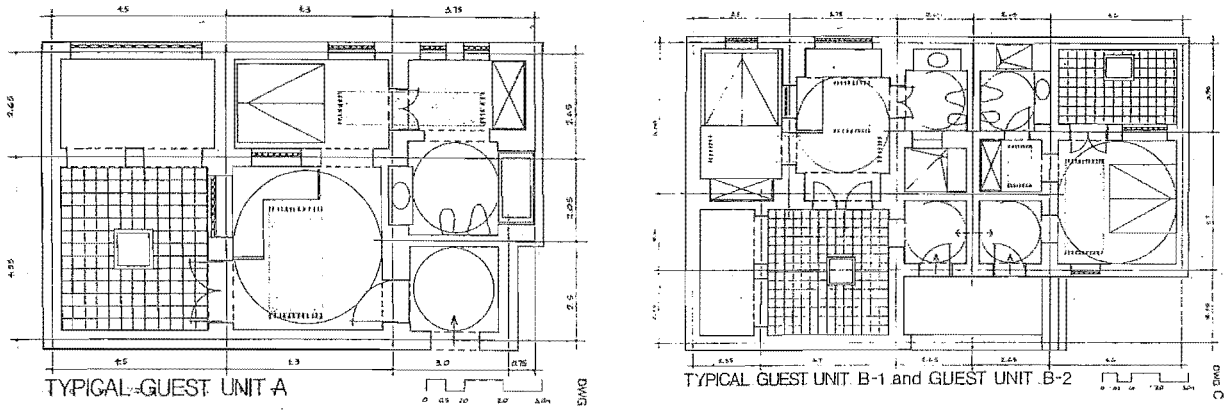
130. Nassif House, plan.



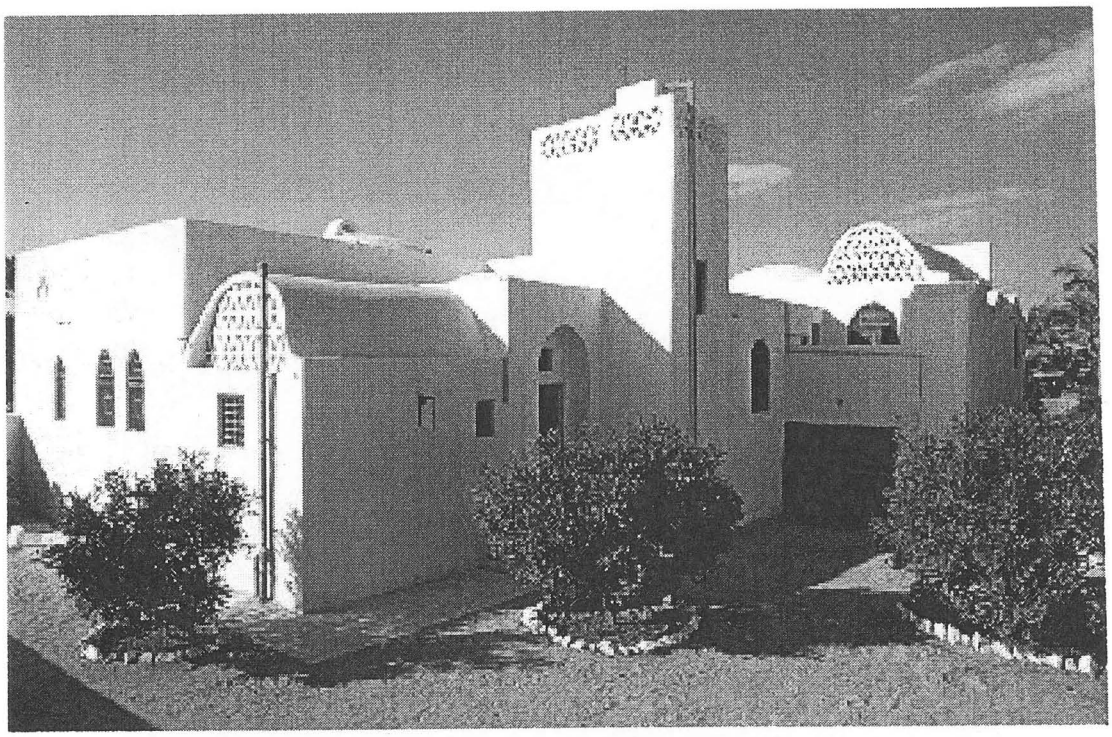
131. Al-Sulaiman Palace, Jeddah, Saudi Arabia, 1975, by Abdel Wahed El-Wakil.



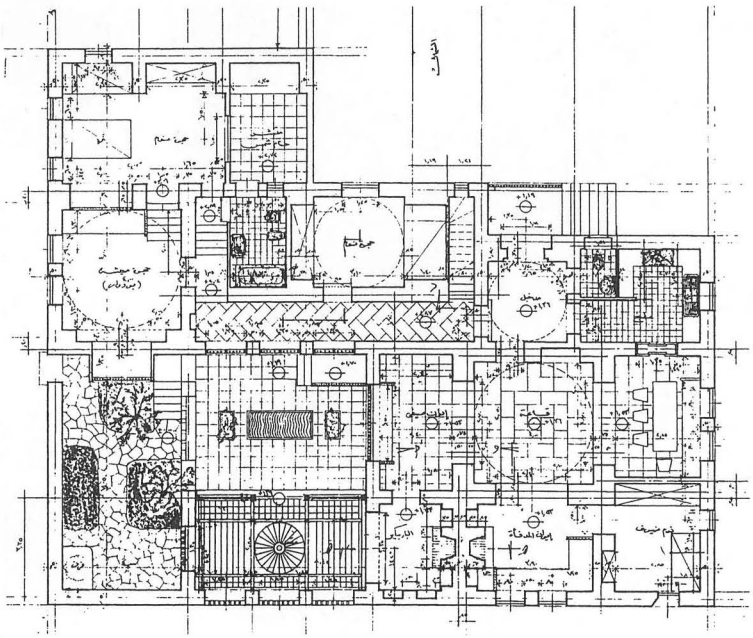
132. Nile Festival Village, Tarh El-Bahr Island, Luxor, (1977-1982),
master's plan and elevation.



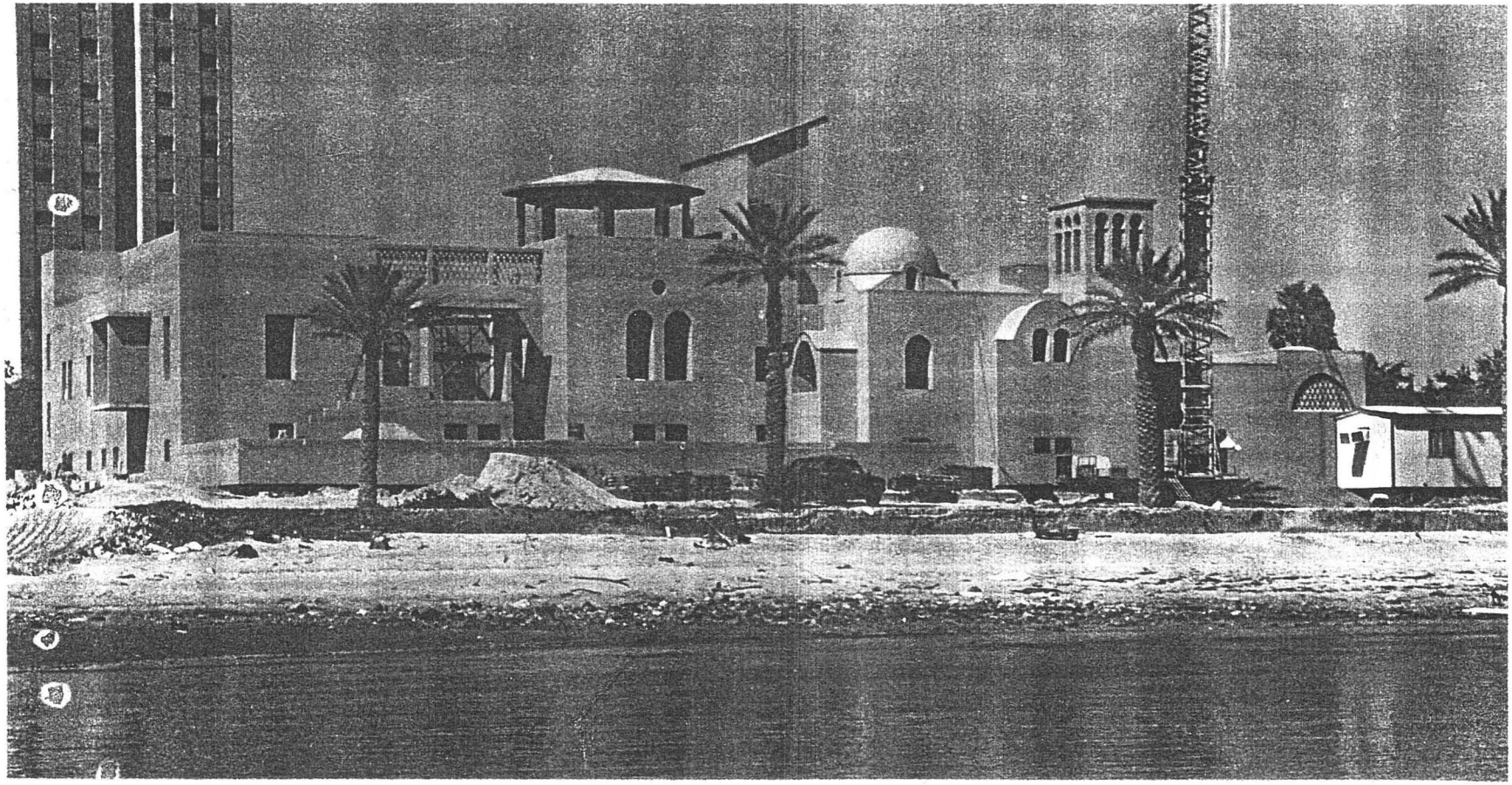
133. Nile Festival Village, unit plans.



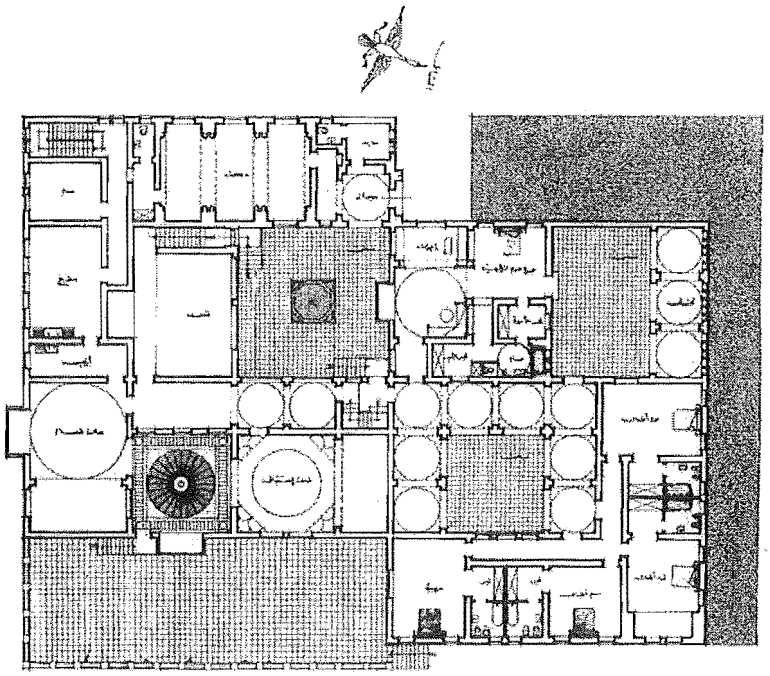
134. Sami House, Dahshur, Giza, 1978.



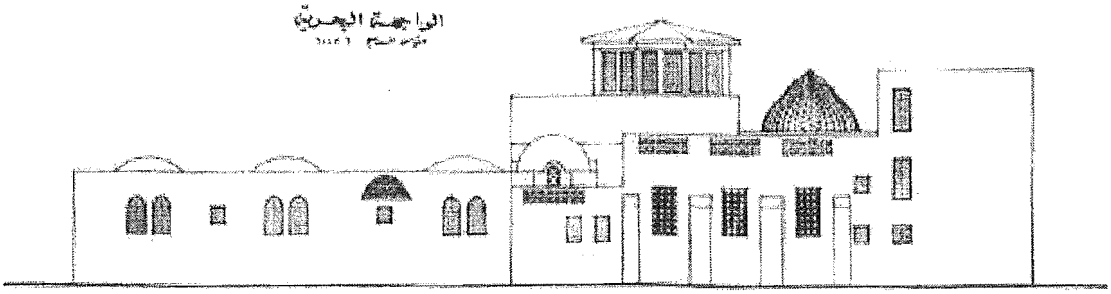
135. Sami House, plan.



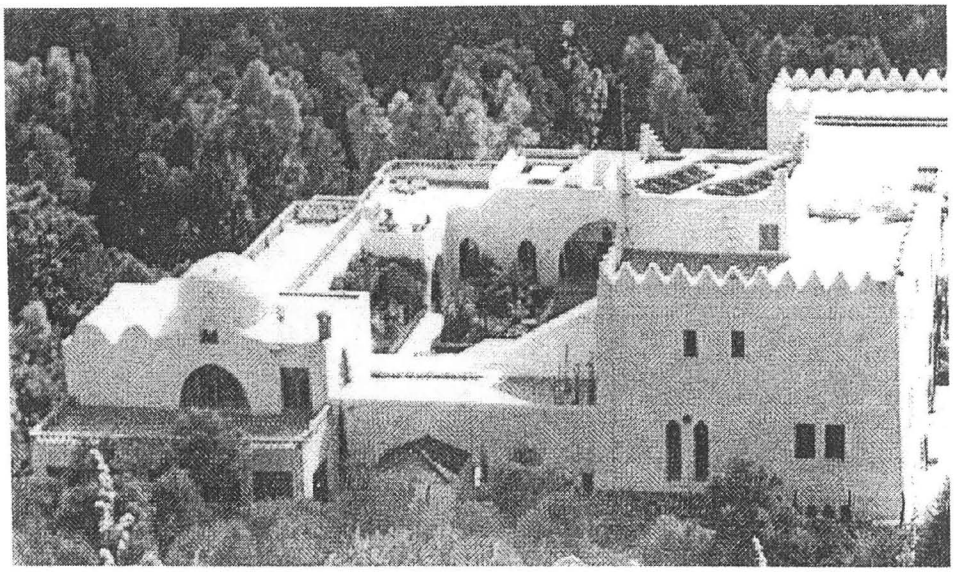
136. Al-Sabah House, Fentas, Kuwait, 1978.



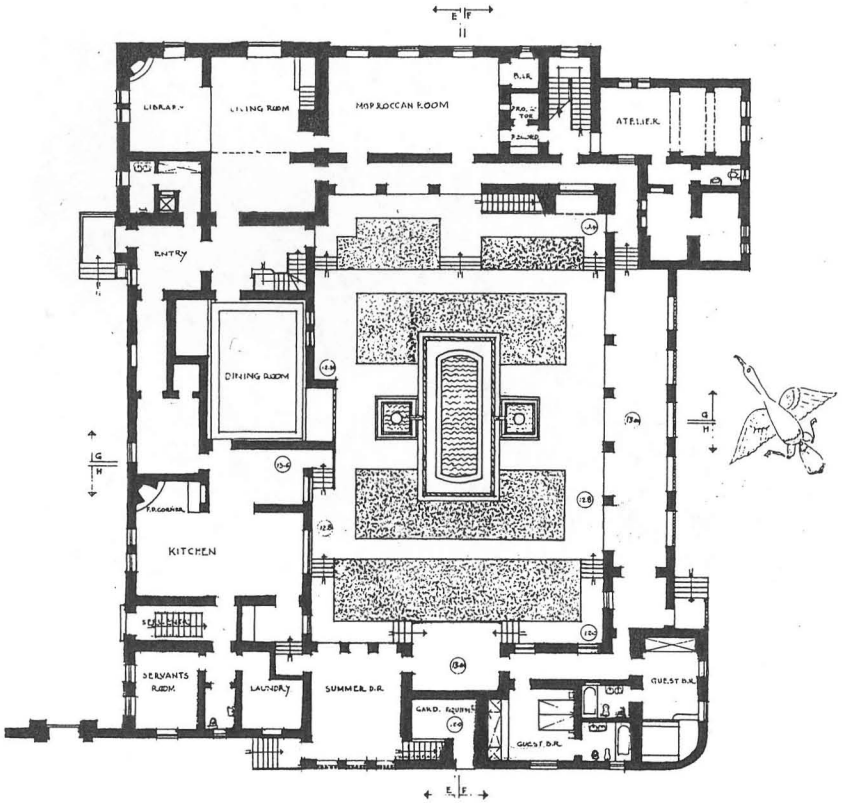
137. Al-Sabah House, plan.



138. Al-Sabah House, elevation.

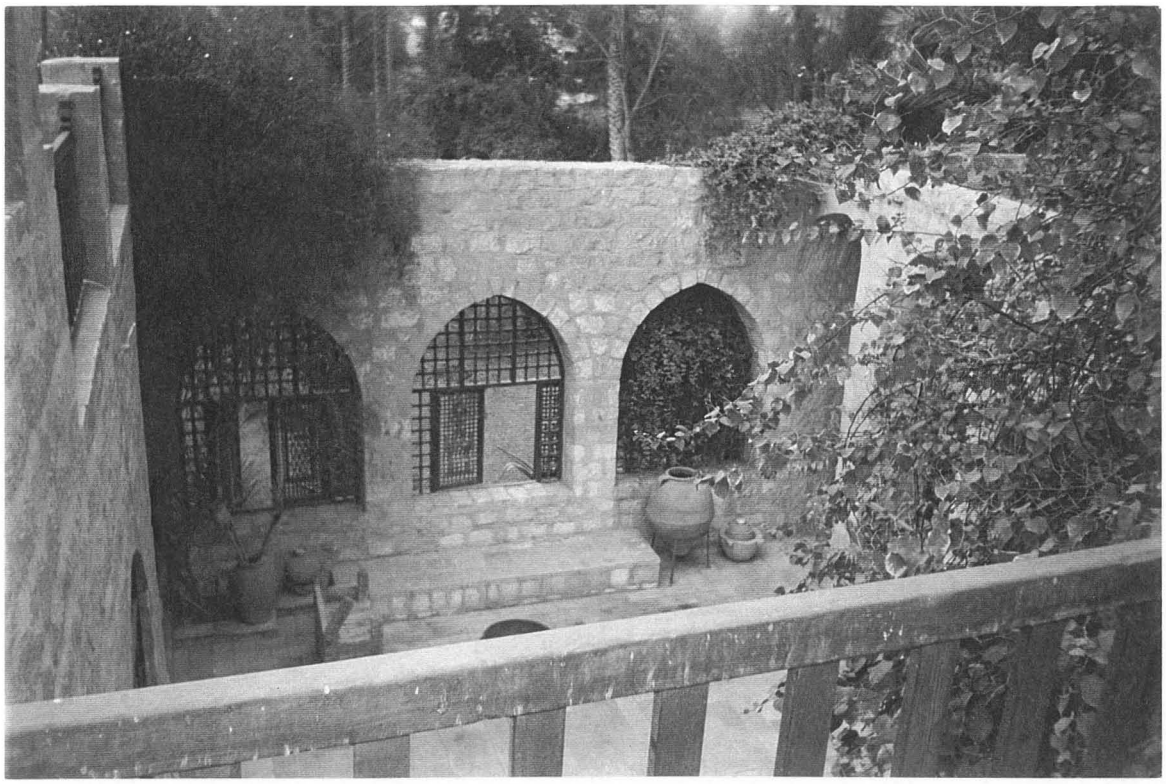


139. Alpha Bianca House, Majorca, Spain, 1979.

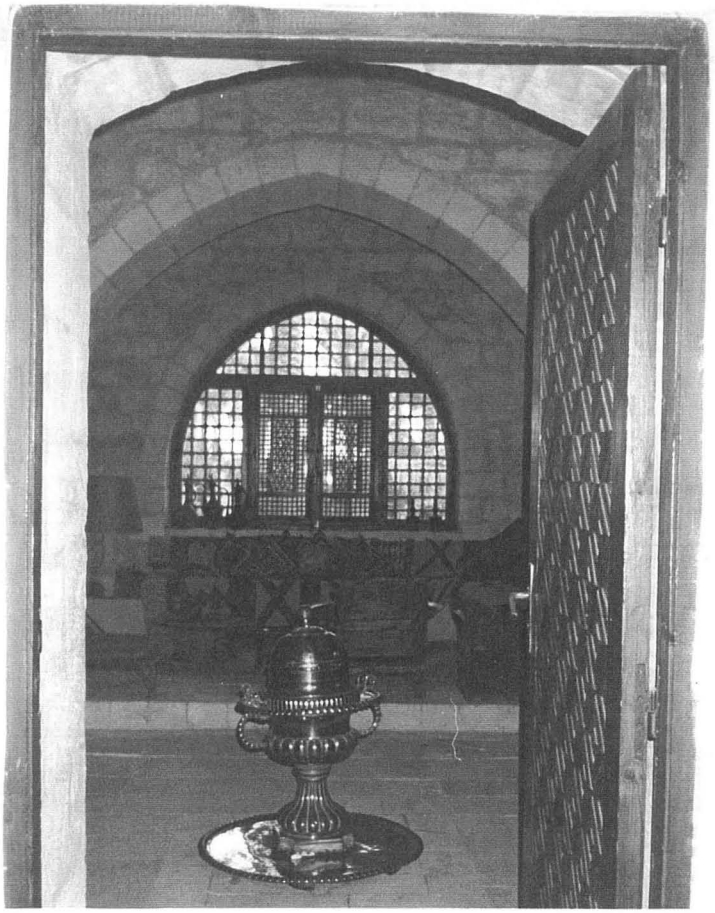


140. Alpha Bianca House, plan.

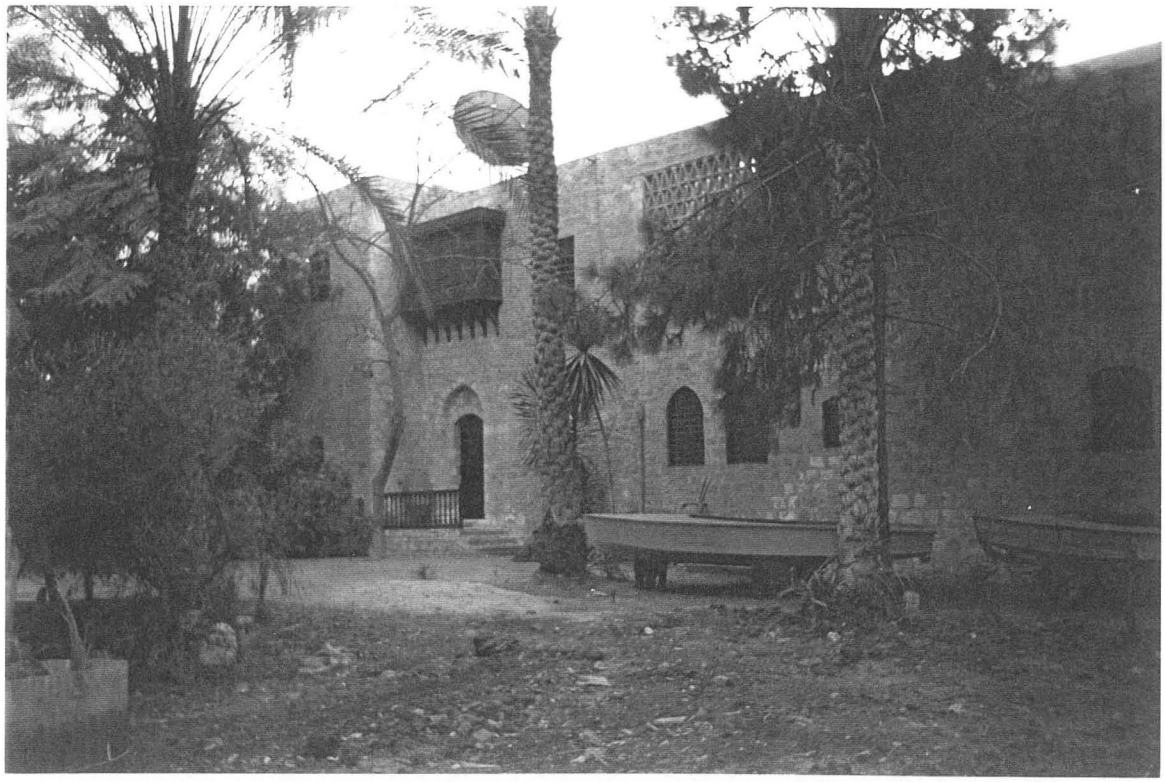
141. Kazerouni House, Shabramant, Giza, 1979.



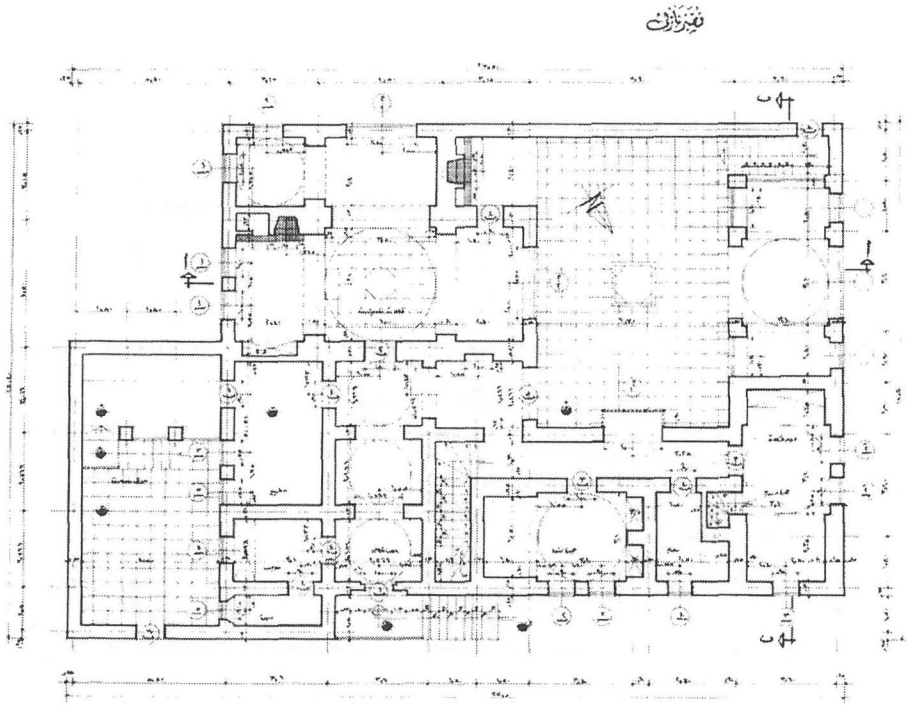
142. Kazerouni House, courtyard with three *mashrabiya* in the west-side wall.



143. Kazerouni House, reception area.

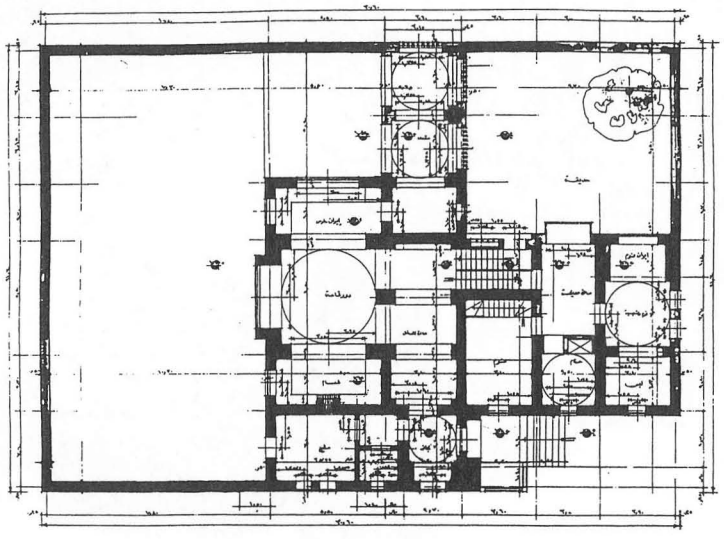


144. Kazerouni House, main entrance with *mashrabiya* above.

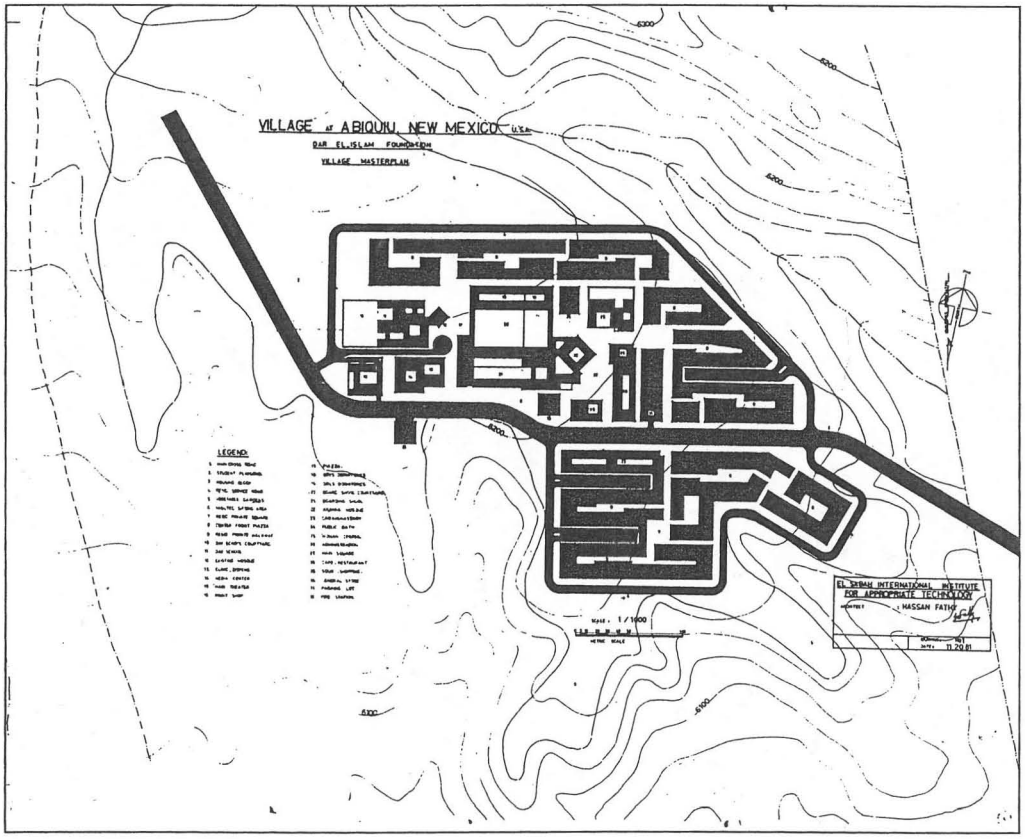


145. Kazerouni House, plan.

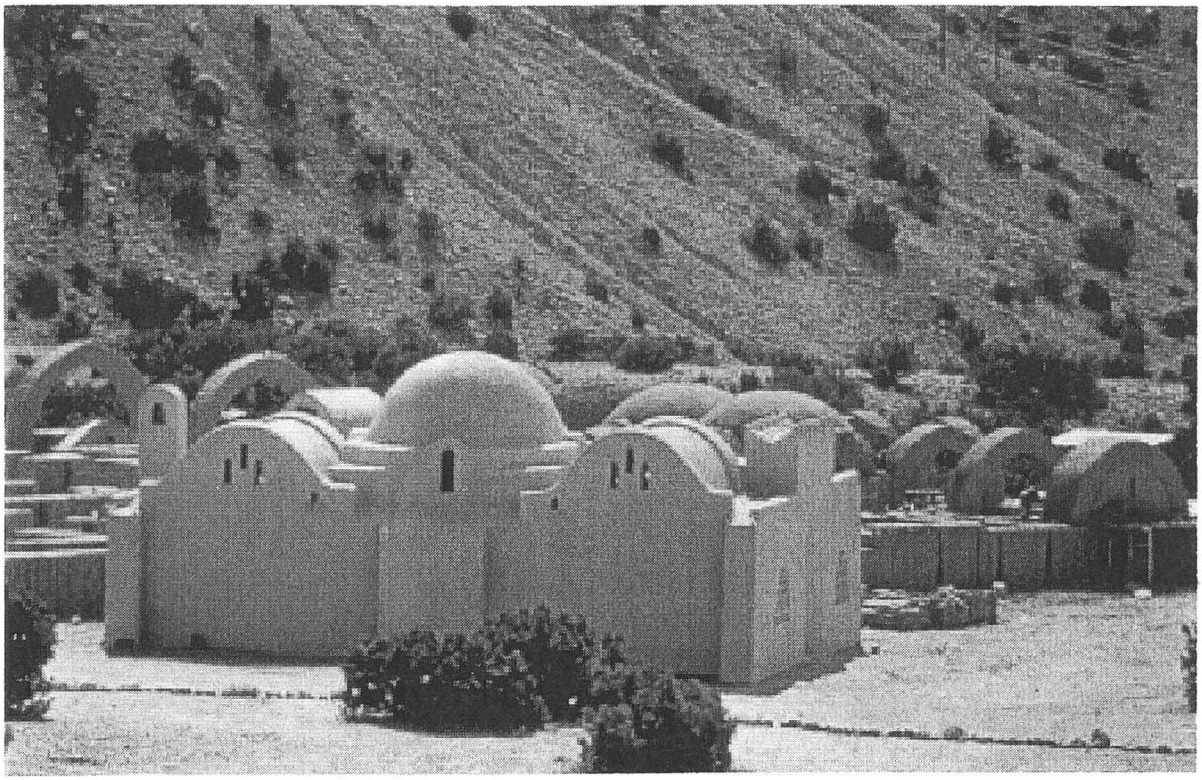
146. Greiss House, Shabramant, Giza, 1980.



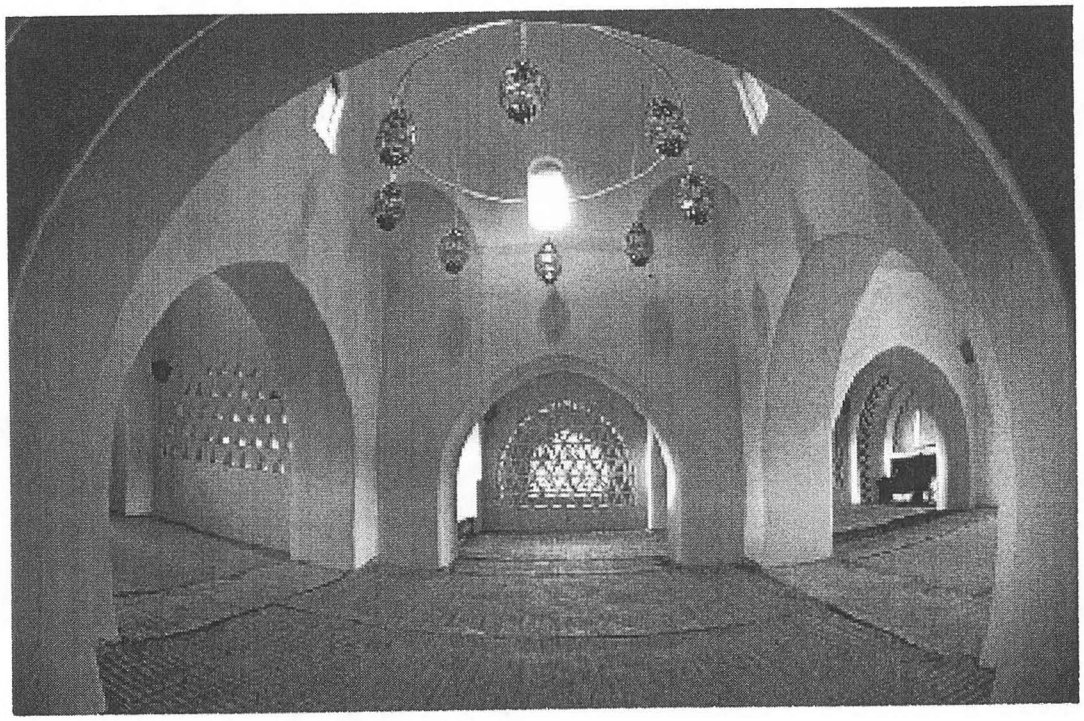
147. Greiss House, plan.



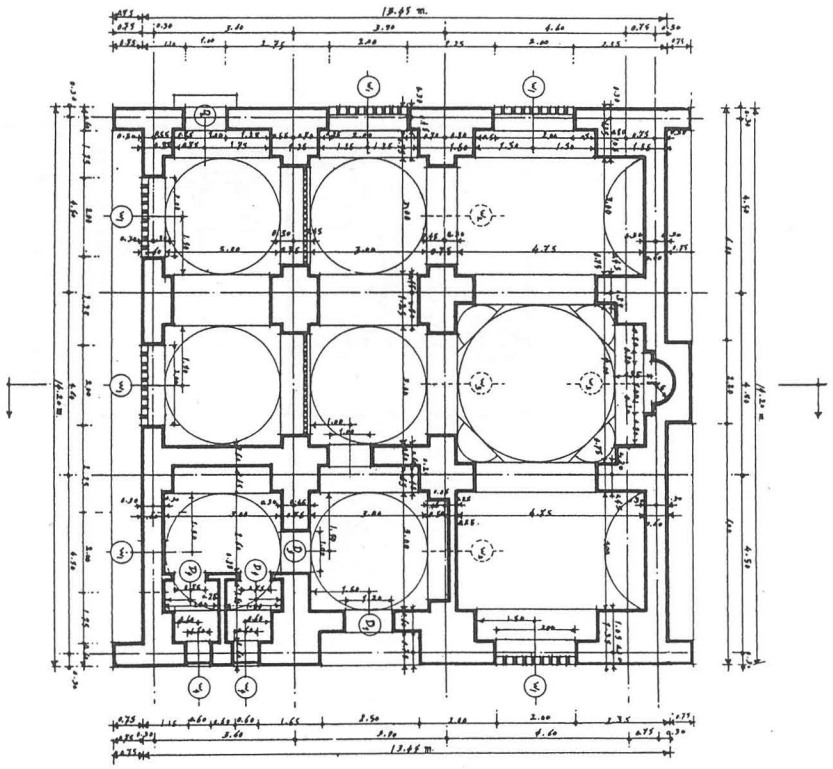
148. Dar Al-Islam Village, Abiquiu, New Mexico, USA, 1980, master plan.



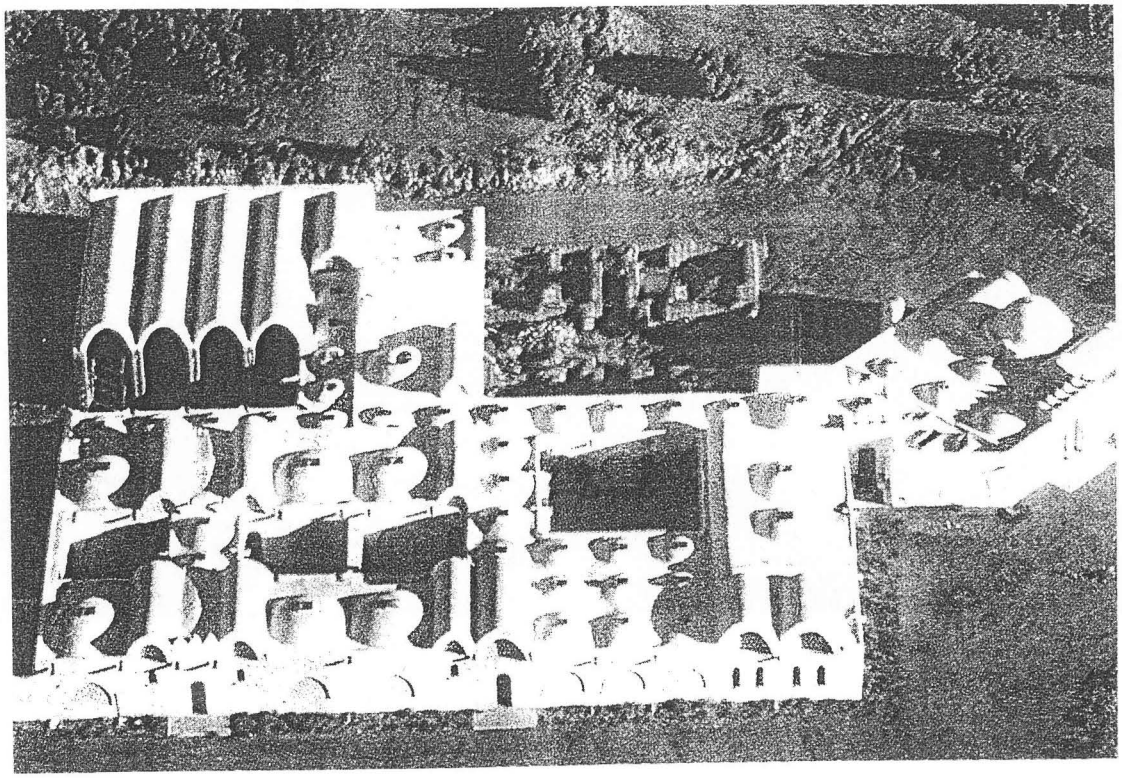
149. Dar Al-Islam Village, mosque.



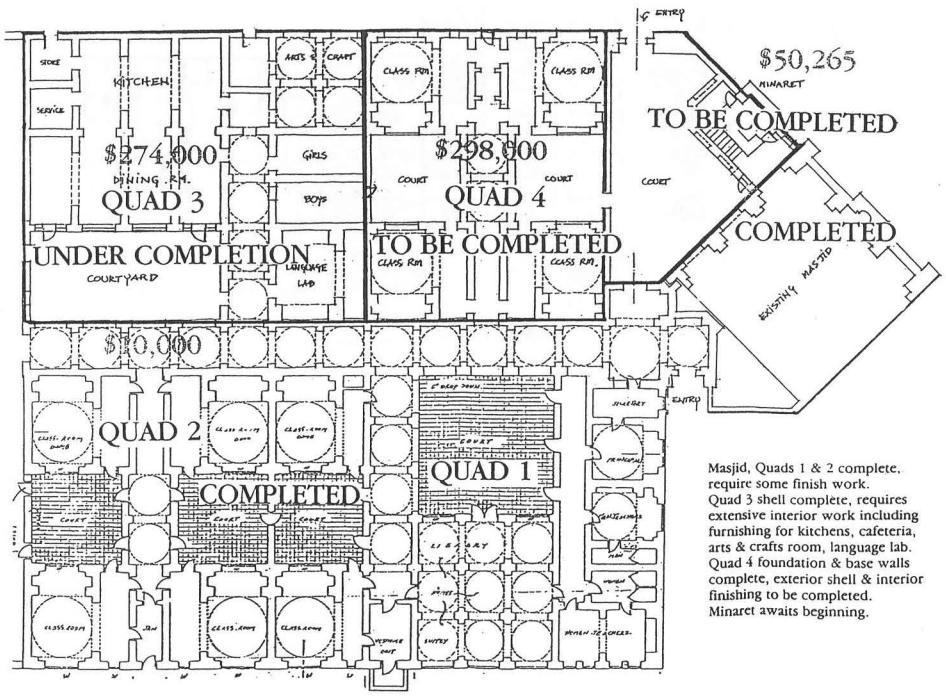
150. Dar Al-Islam Village, mosque interior.



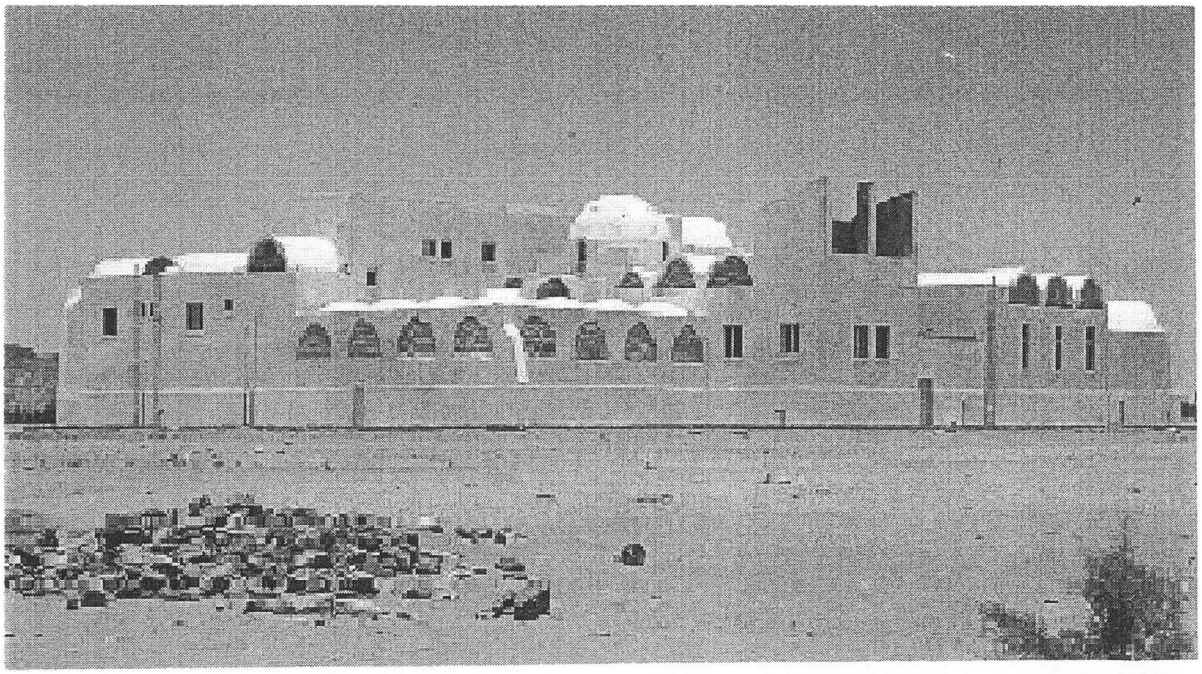
151. Dar Al-Islam Village, mosque plan.



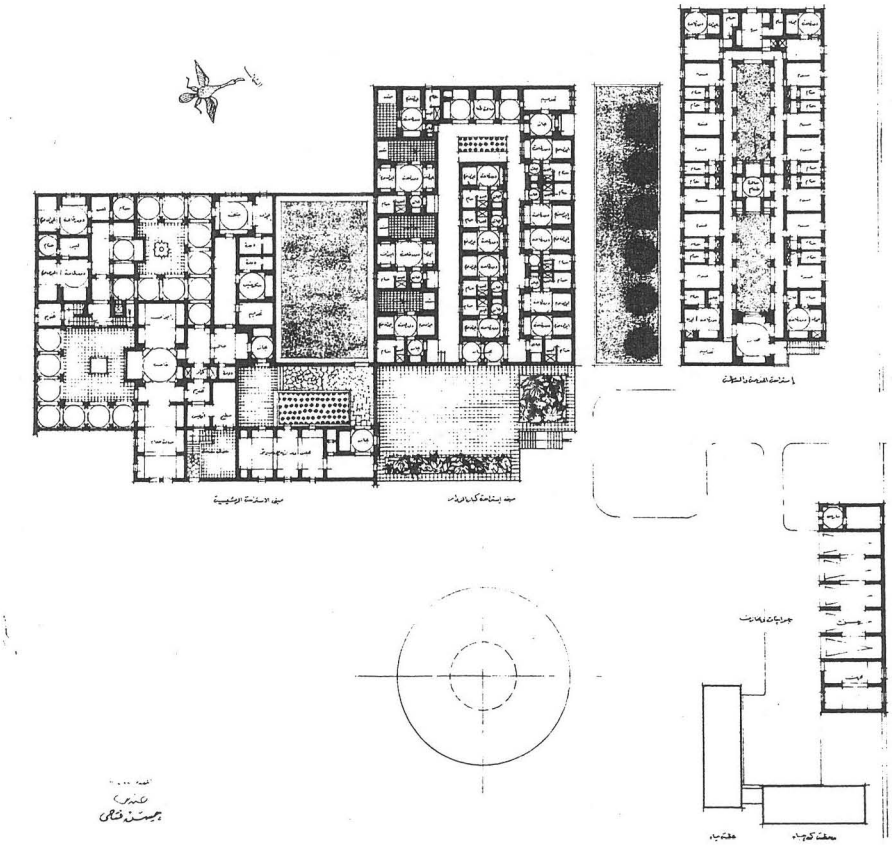
152. Dar Al-Islam Village, School.



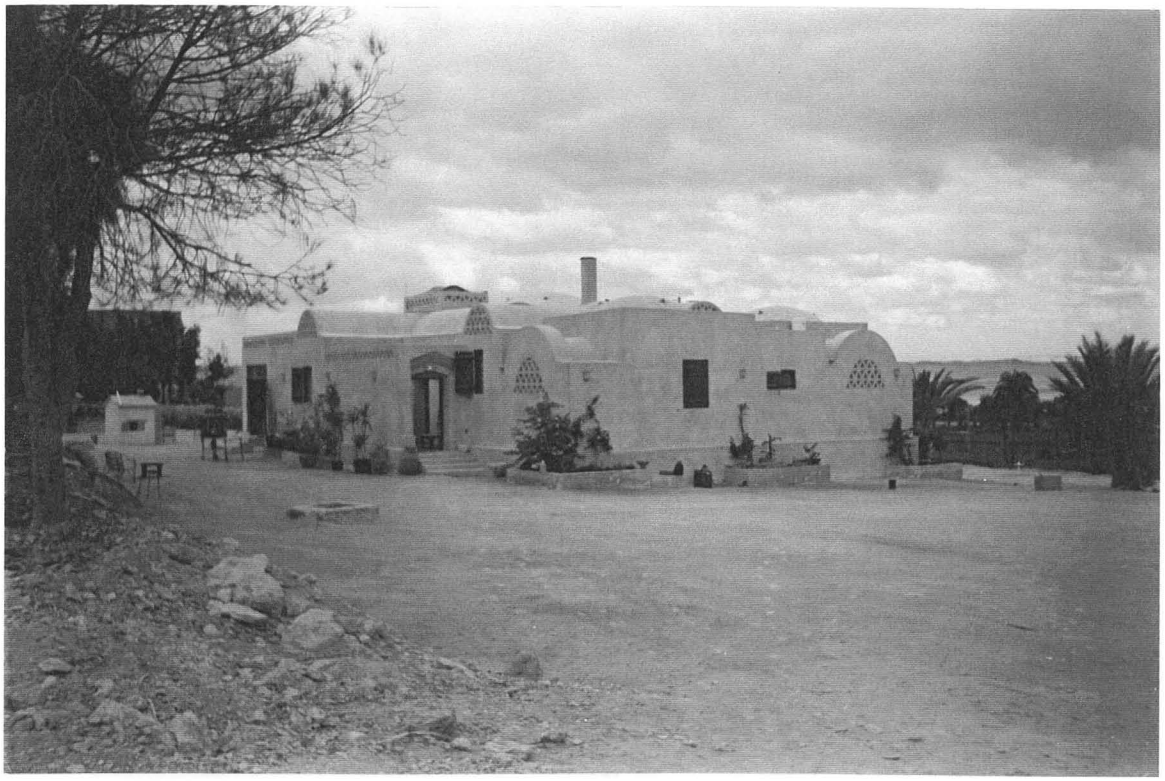
153. Dar Al-Islam Village, School plan.



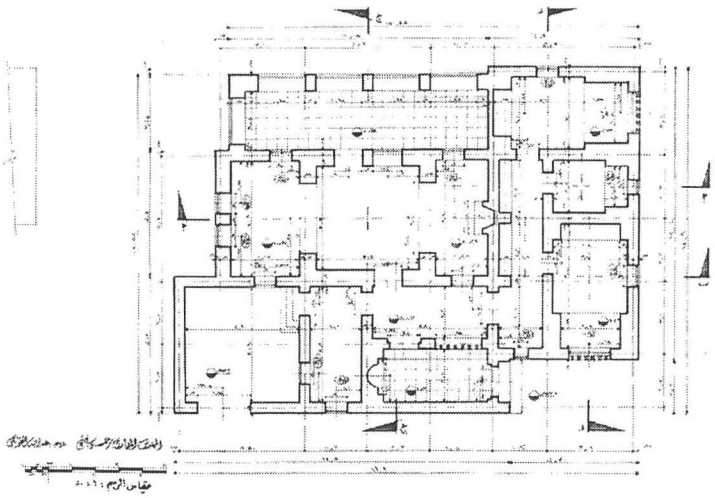
154. Presidential Resthouse, Garf Husein, Aswan, 1981.



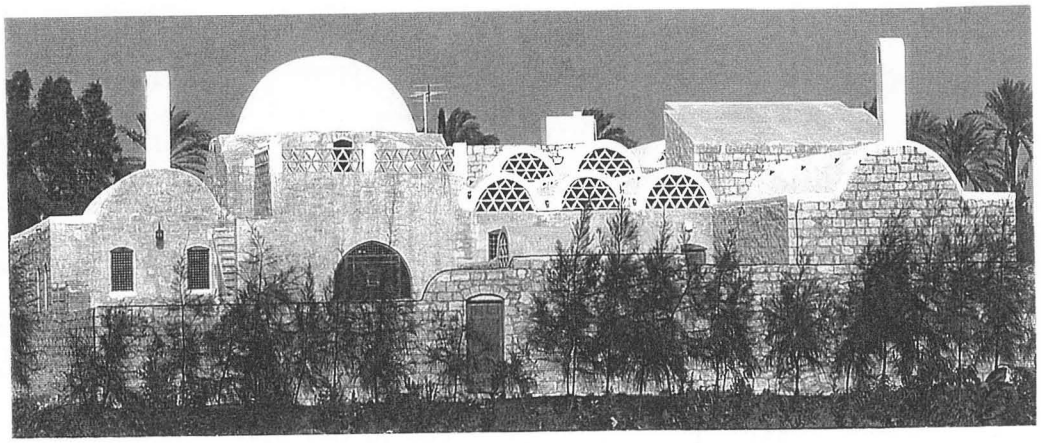
155. Presidential Resthouse, plan.



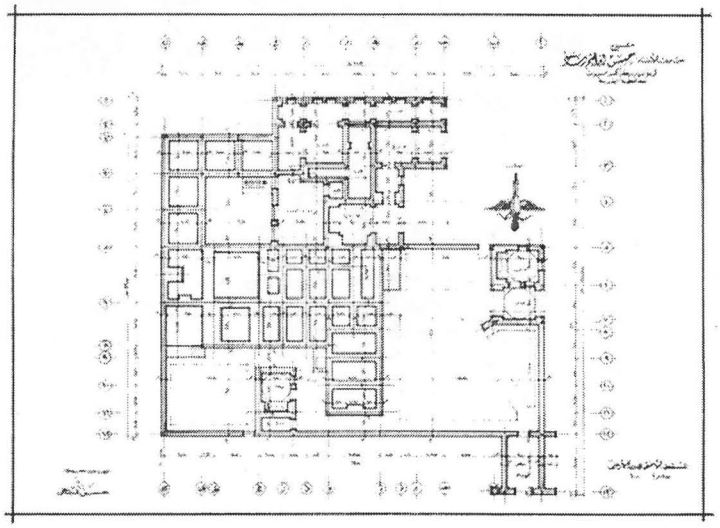
156. Andrioli House, Tunis village, Fayum, 1984.



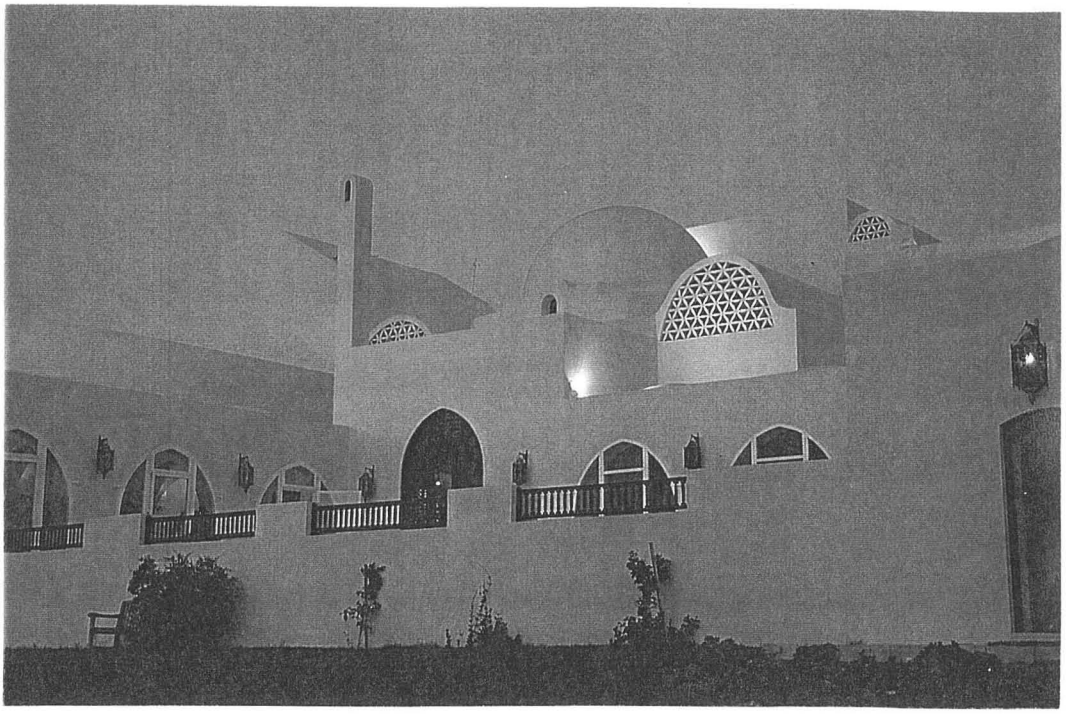
157. Andrioli House, plan.



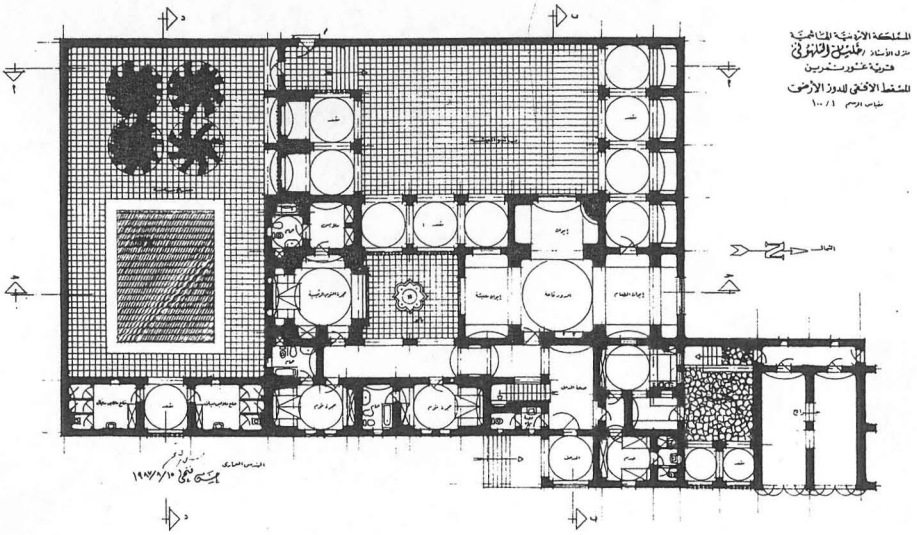
158. Rashad House, Tanta, 1986.



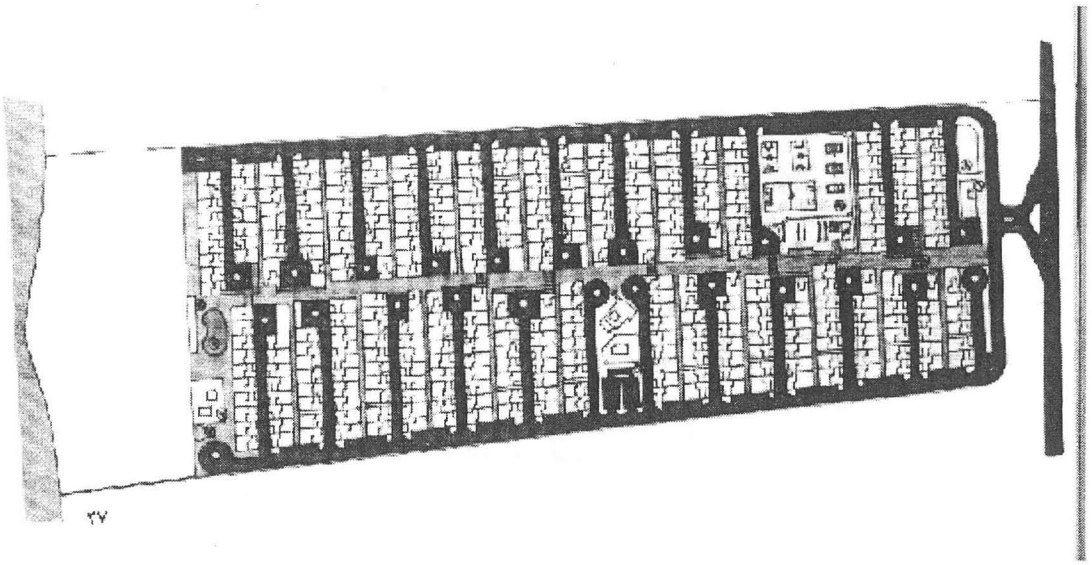
159. Rashad House, plan.



160. Talhuni House, Amman, Jordan, 1988.

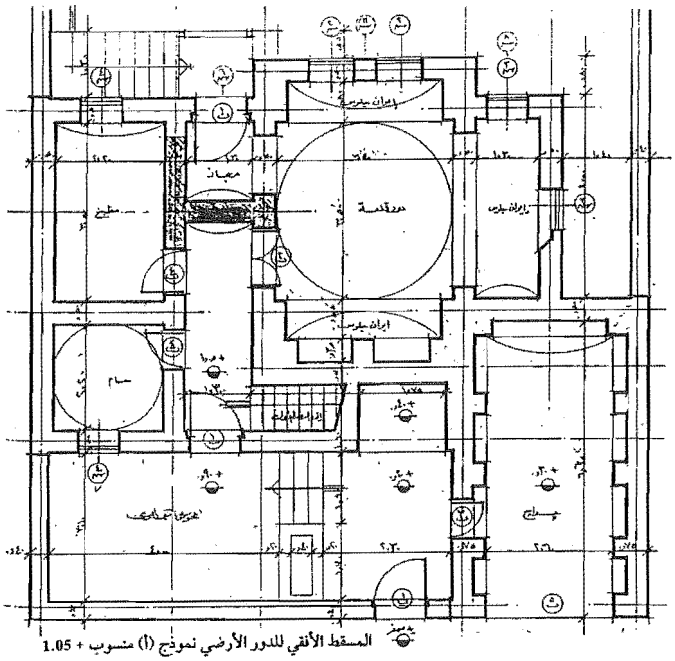


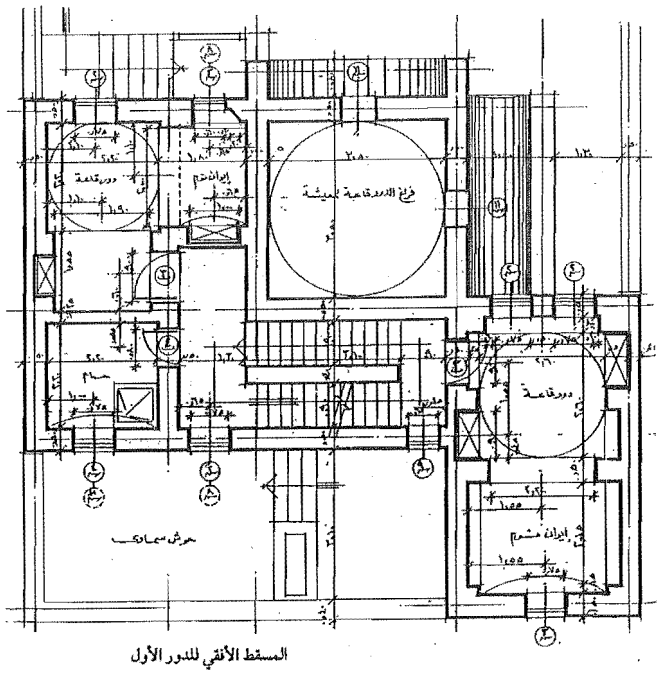
161. Talhuni House, plan.



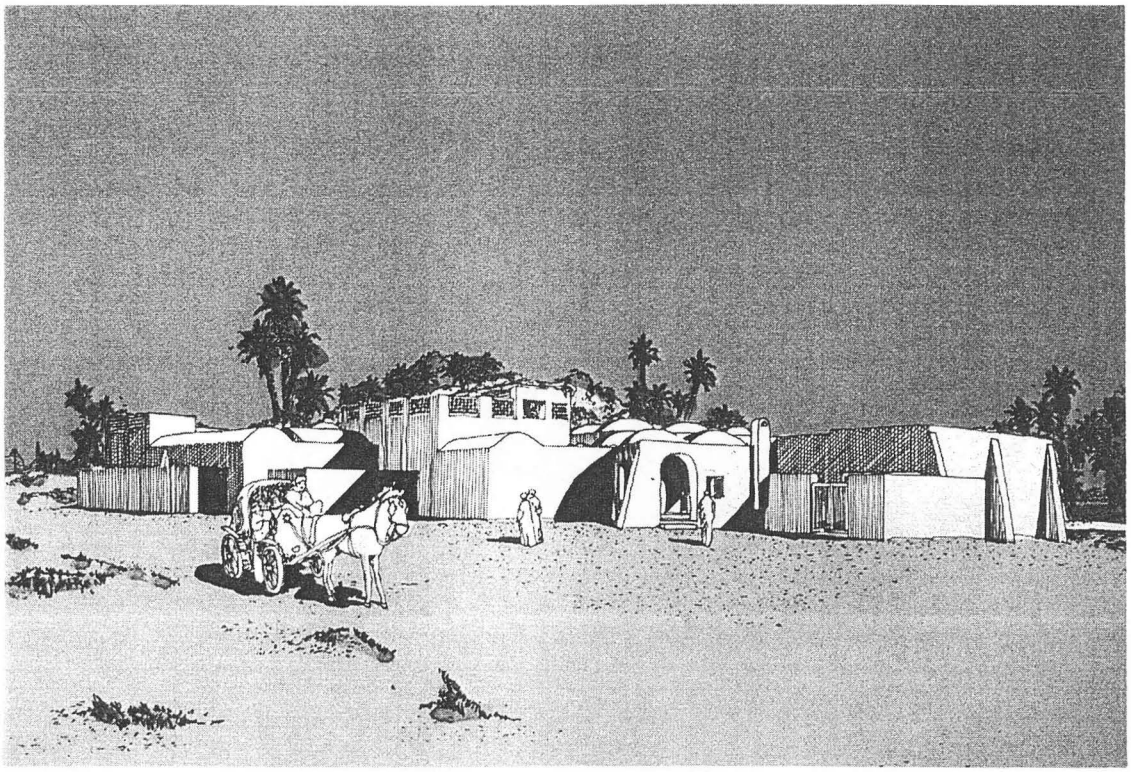
162. Journalists' Resort Village, North Coast, west of Alexandria, 1989, master plan.

163. Journalists' Resort Village, housing.

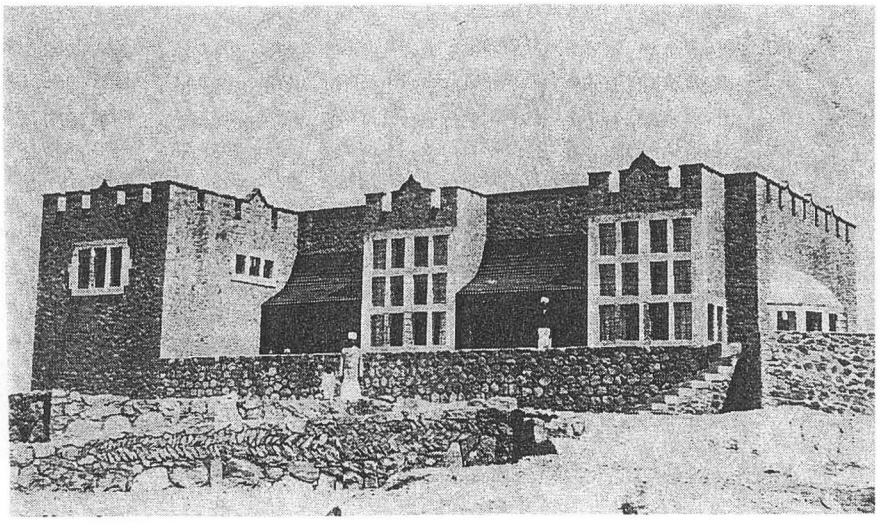




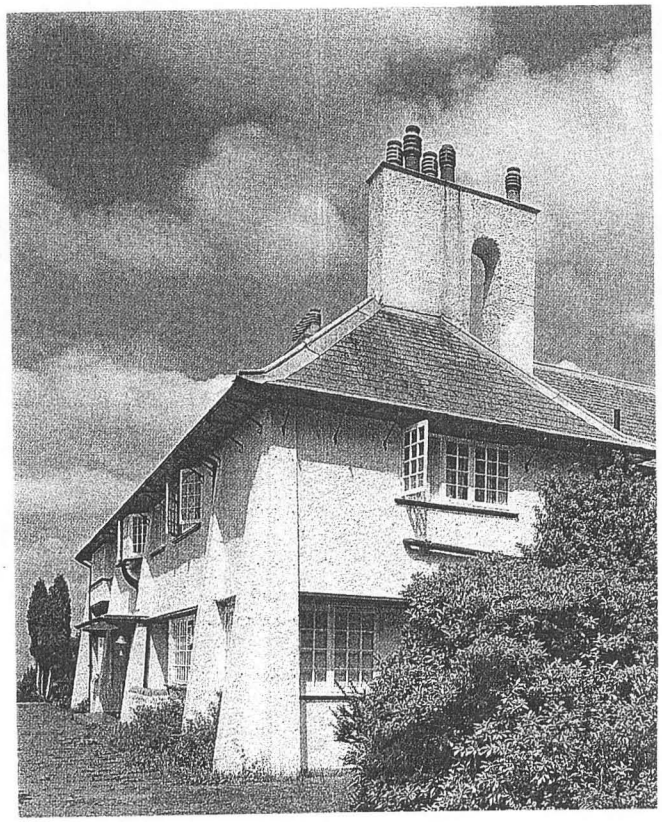
164. Journalists' Resort Village, unit plans.



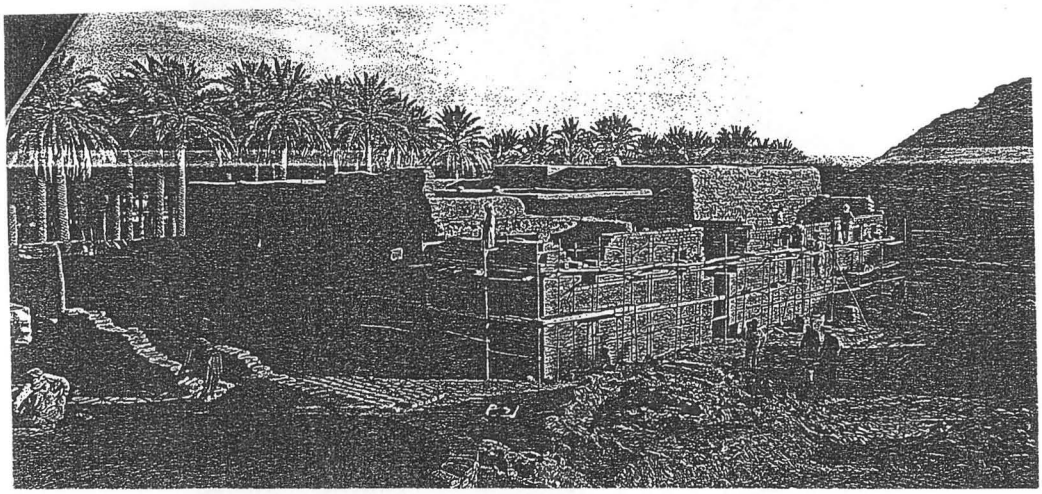
165. Brooklyn Museum's Theban Expedition residential compound, Luxor, Egypt, c. 1978, by Esherick, Homsey, Dodge & Davis.



166. Leigh Canney House, Aswan, Egypt, 1905, by CFA Voysey.

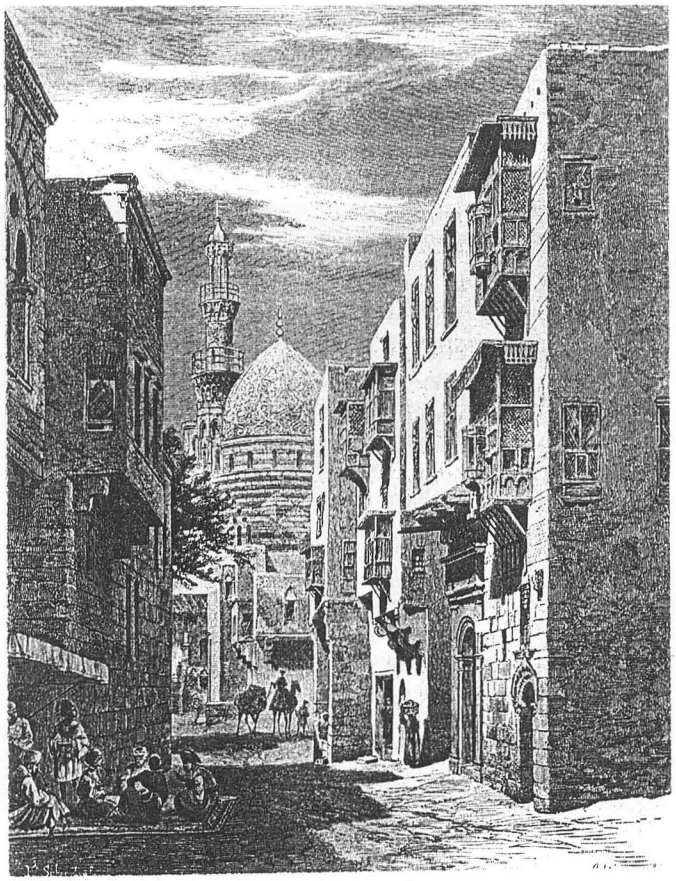


167. Perrycroft House, Malvern Hills, 1893, by CFA Voysey.

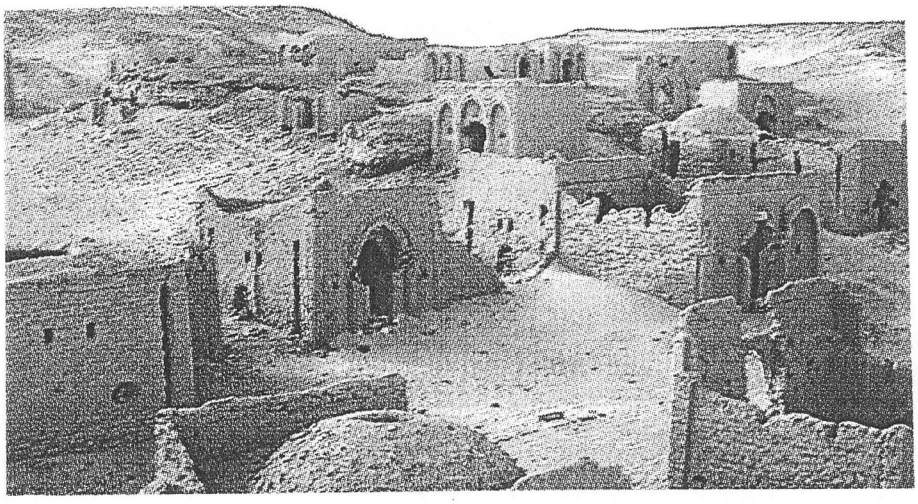


168. Al-Udhaibat Farmhouse, Al-Dariya, Saudi Arabia, reconstructed by Prince Sultan Al Sa'ud in 1986.

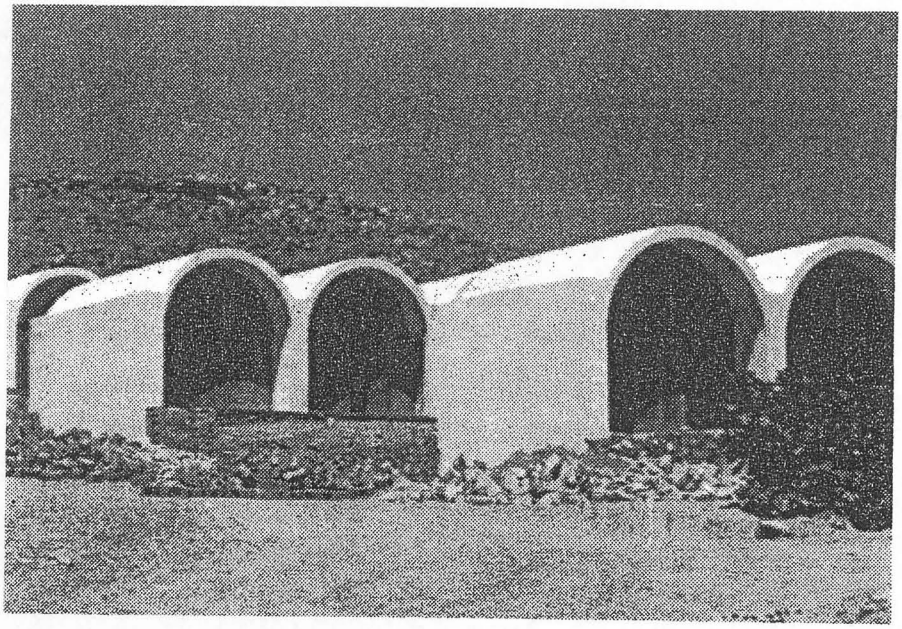
169. Craft and Pottery School, Fayum, Egypt, c. 1970s, by Eyvilin Boria.



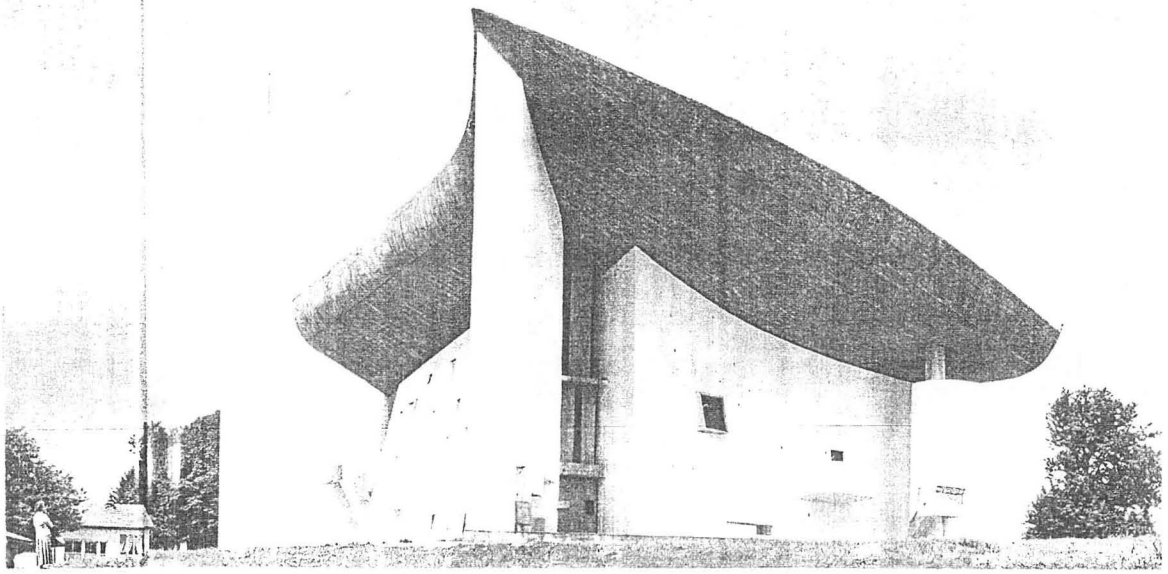
170. Street in old Cairo, c. 1860.



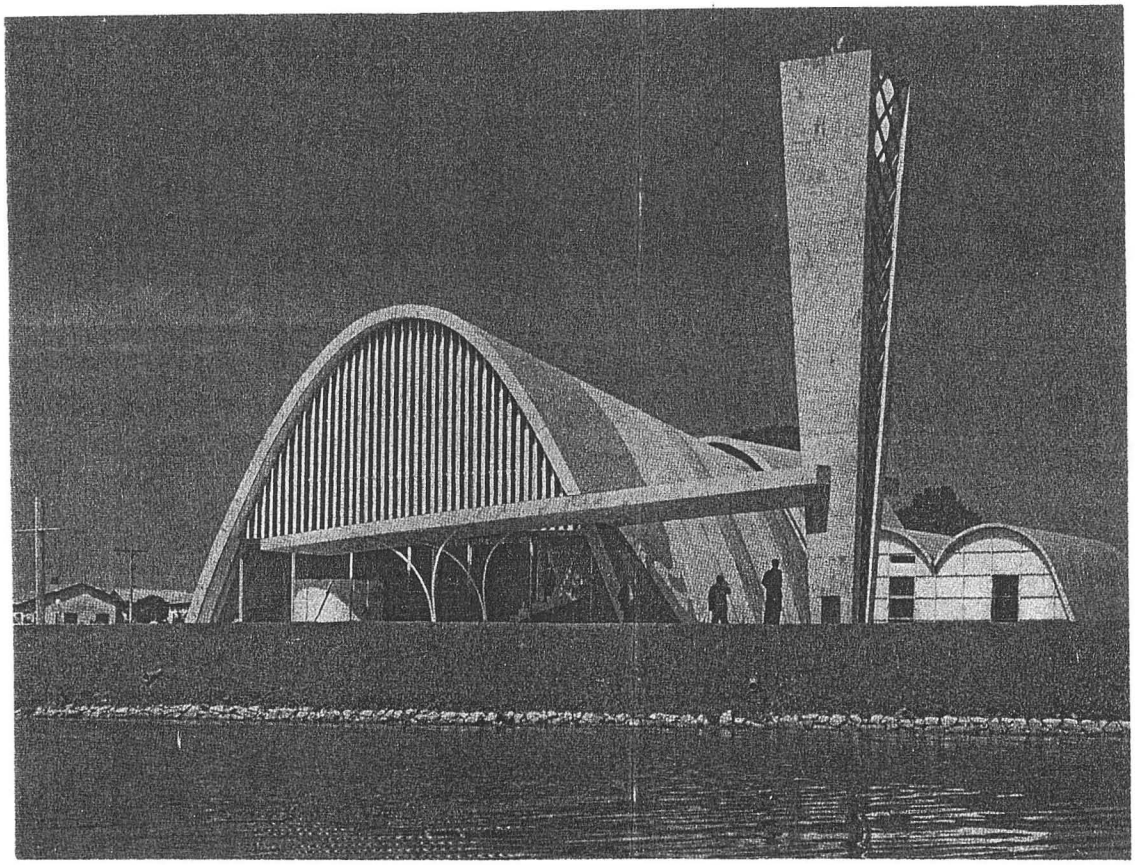
171. Bagawat settlement, Kharga Oasis, 4th century.



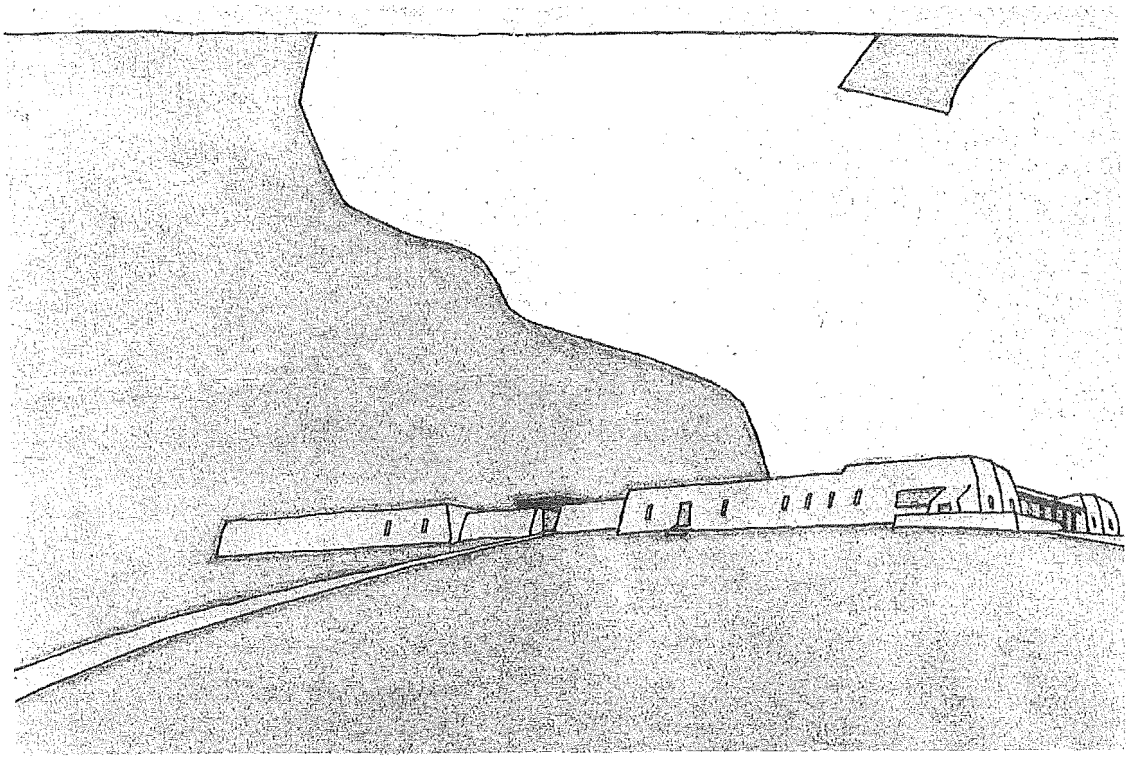
172. Santorini Village, Santorini, Greece, 1960,
by Constantinos Doxiadis.



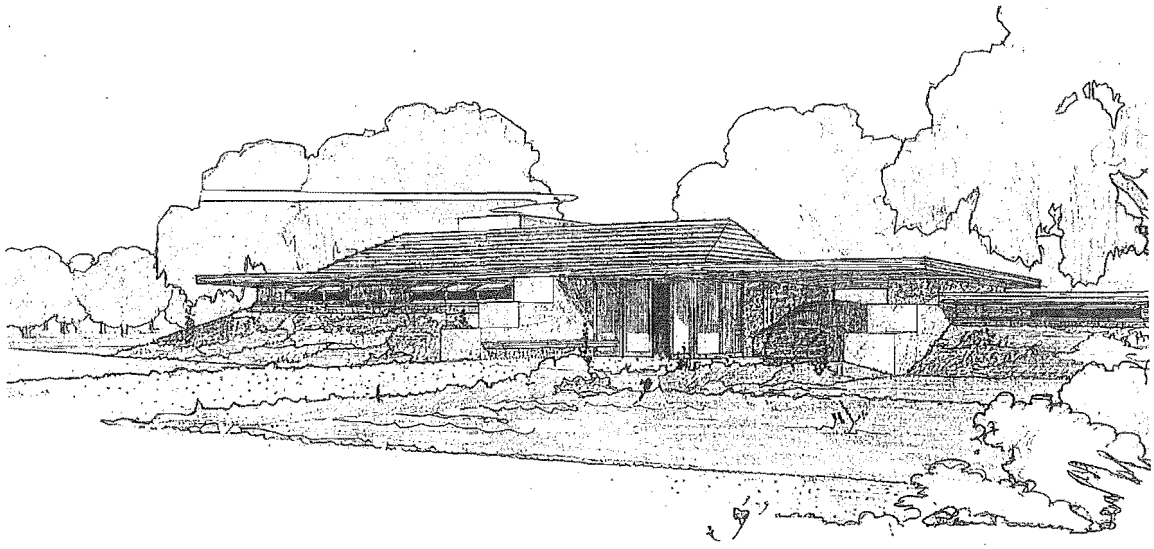
173. Notre Dame du Haut Chapel, Ronchamp, (1950-1954), by Le Corbusier.



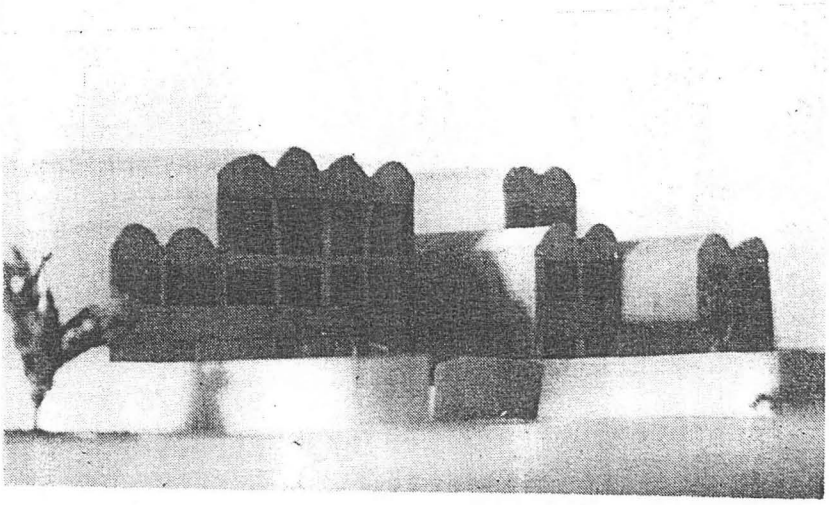
174. Saint Francis of Assisi Church, Pampulha, State of Minas Gerais, Brazil, 1943, by Oscar Niemeyer.



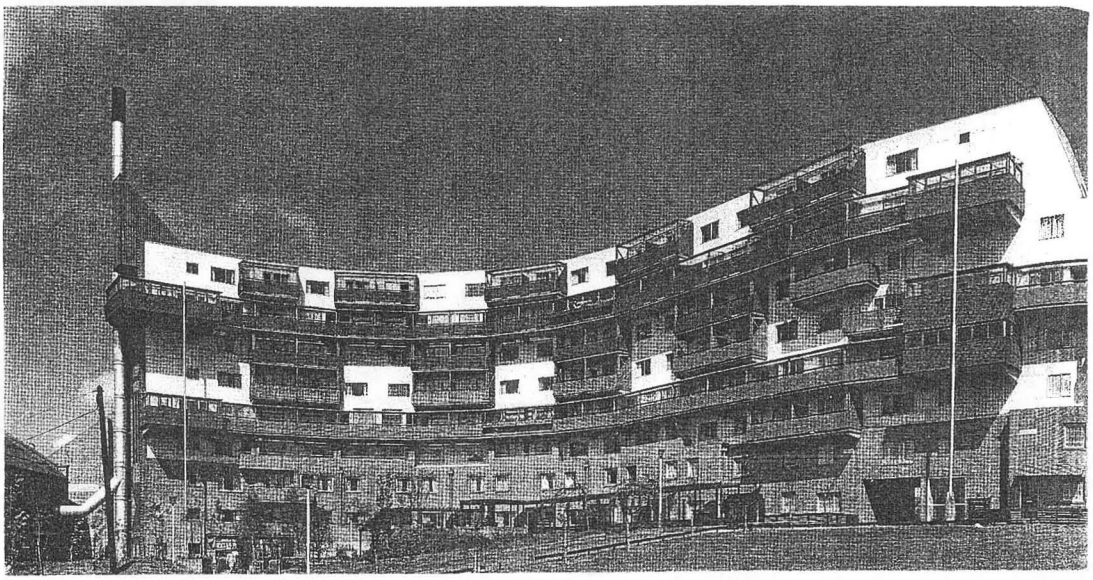
175. T. P. Martin House, Taos, New Mexico, 1915, by Rudolph Schindler.



176. Cooperative Homesteads Project, Detroit, Michigan, (1941-1945),
by Frank Lloyd Wright.

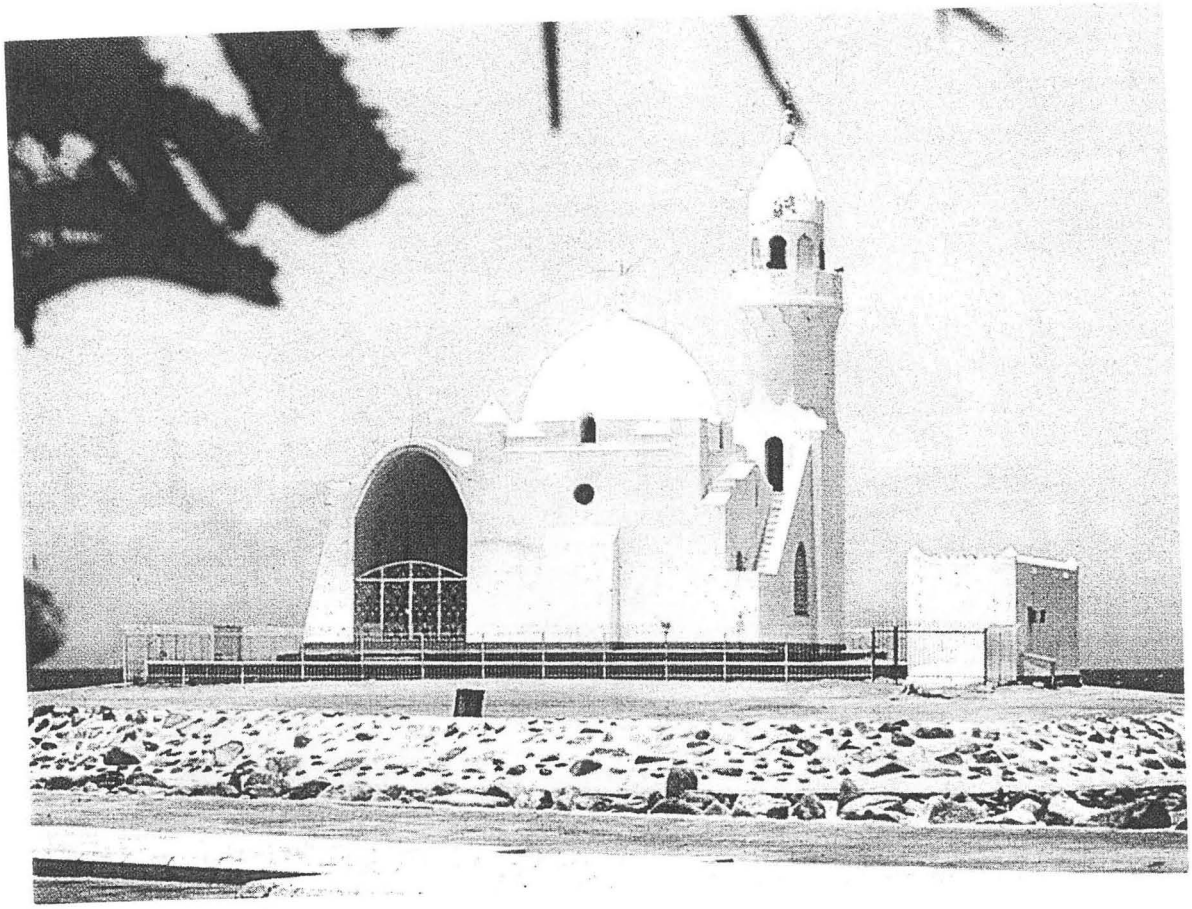


177. Sainte-Baume Shrine, near Marseilles, 1948, by Le Corbusier.

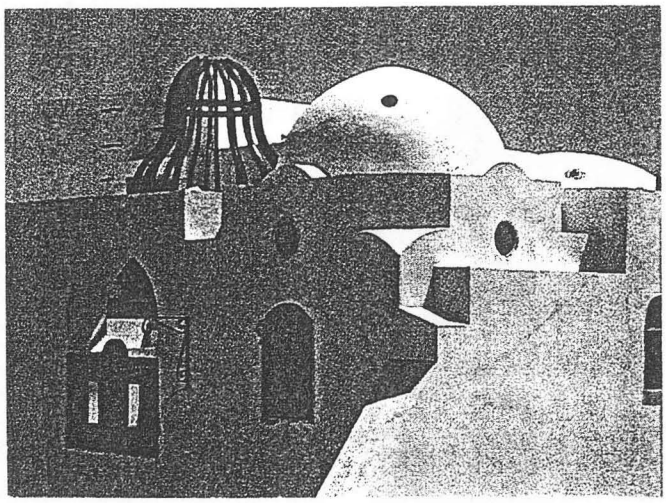


178. Byker Wall Housing Project, Newcastle-on-Tyne, (1969-1980),
by Ralph Erskine.

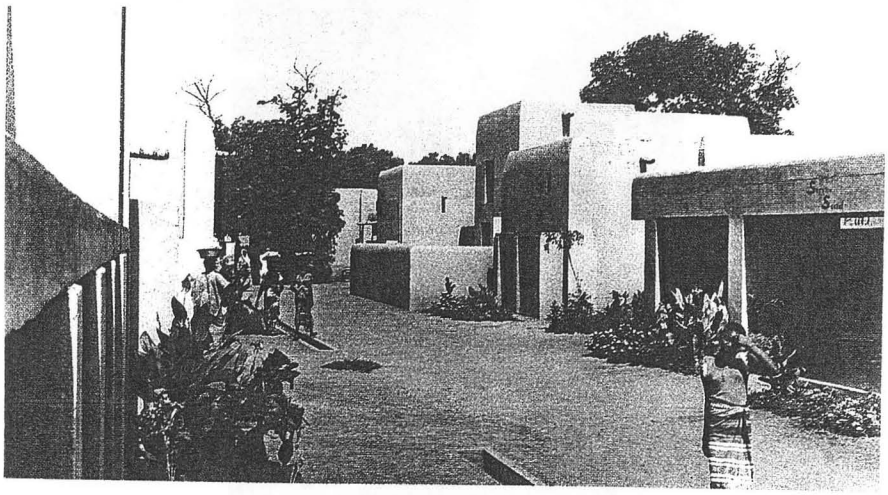
179. Halawa house, Al-Agamy, near Alexandria, (1972-1975),
by Abdel Wahid El-Wakil.



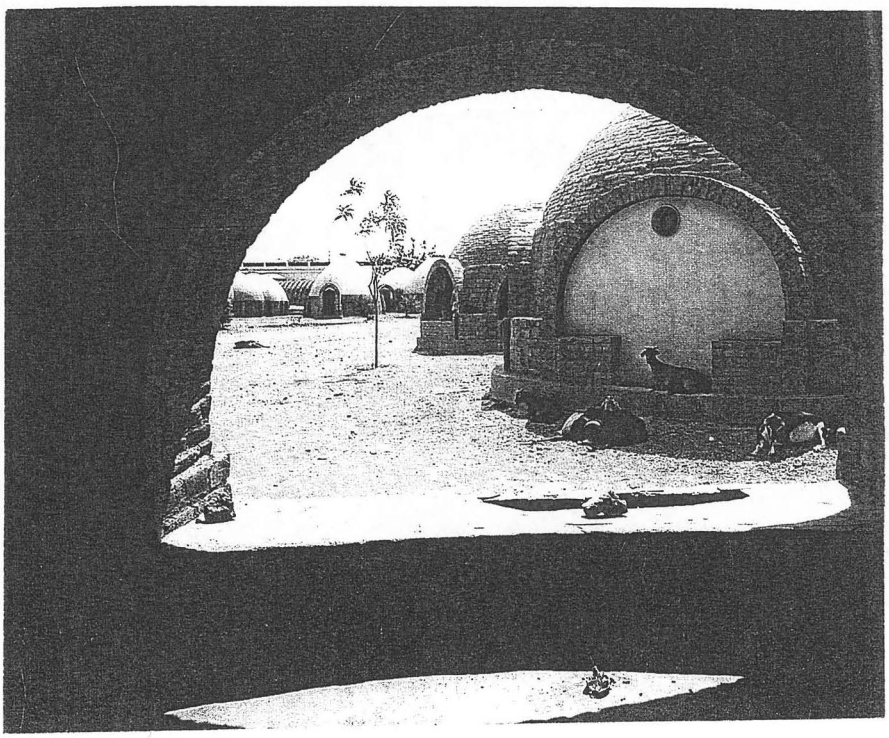
180. Corniche mosque, Jeddah, Saudi Arabia, 1986, by Abdel Wahid El-Wakil.



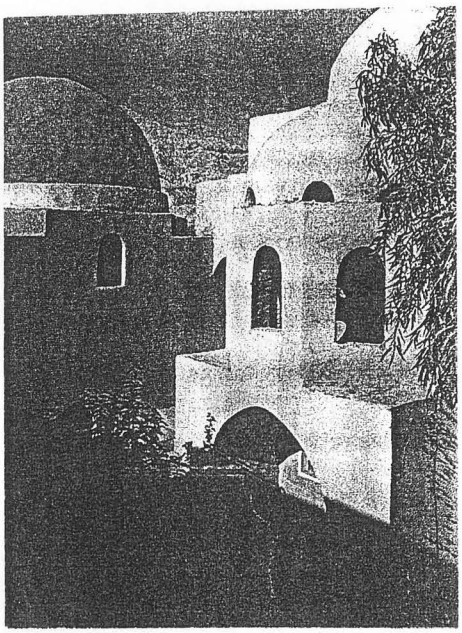
181. Al-Touni House, Fayum, 1990, by Ahmed Hamid.



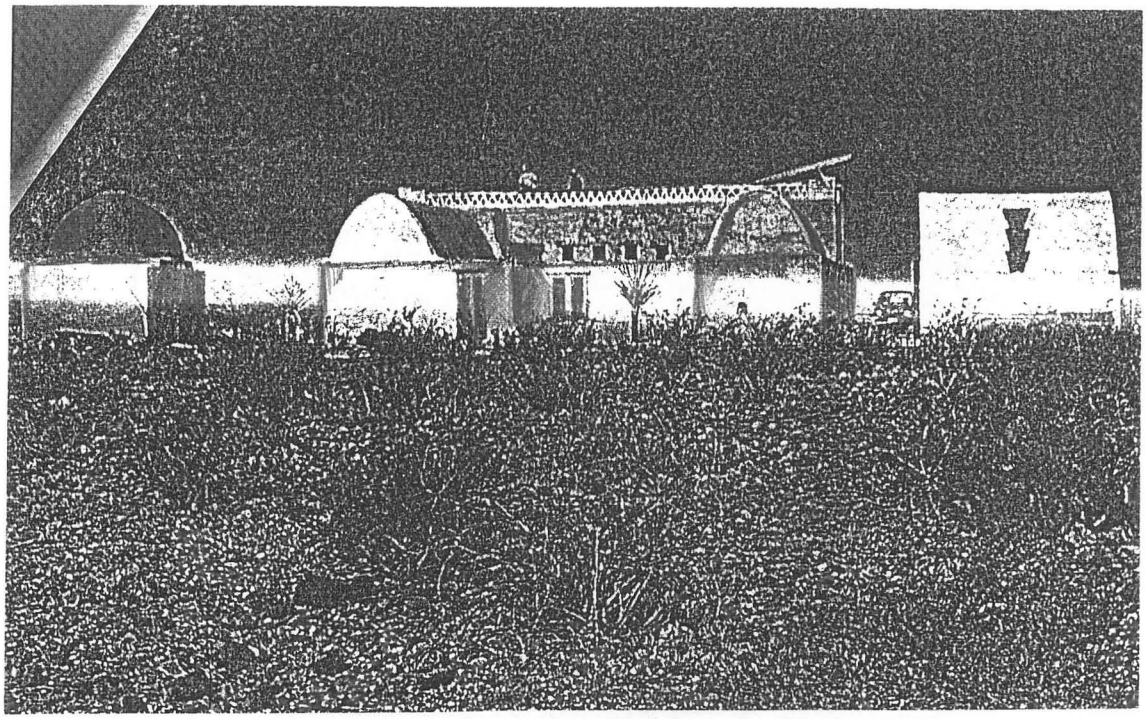
182. Mopti Medical Centre, Mali, 1976, by André Ravereau.



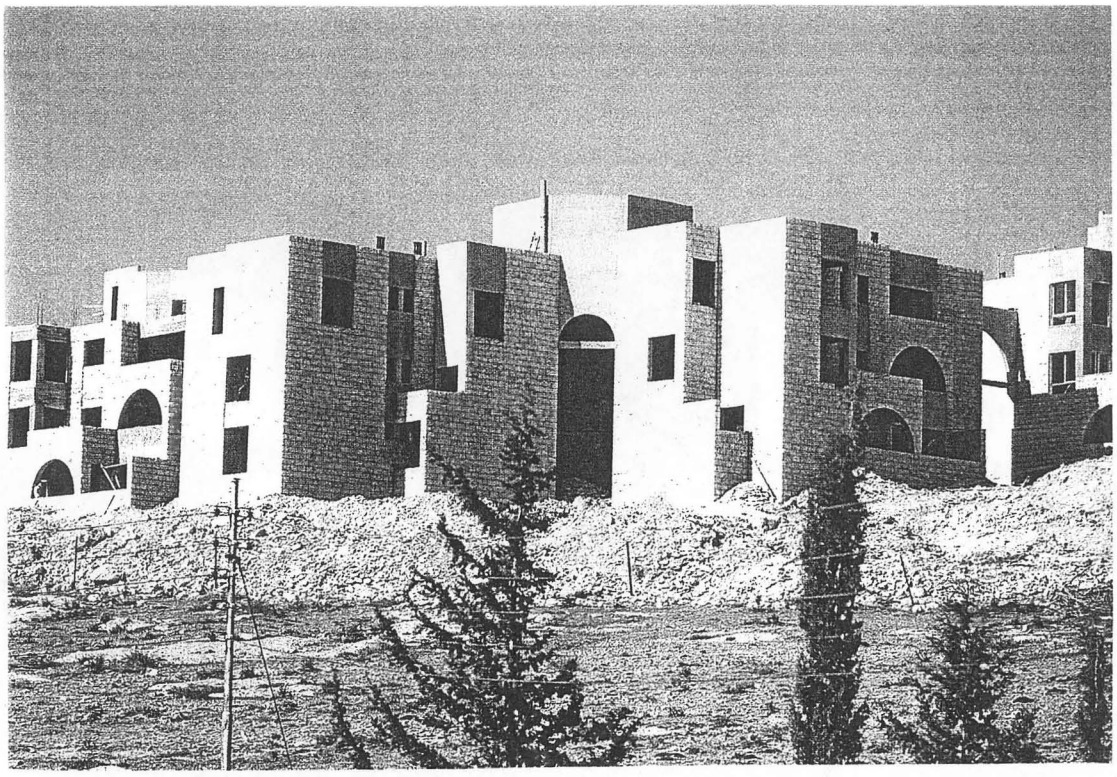
183. Kaedi Hospital, Mauritania, 1989, by Fabrizio Carola.



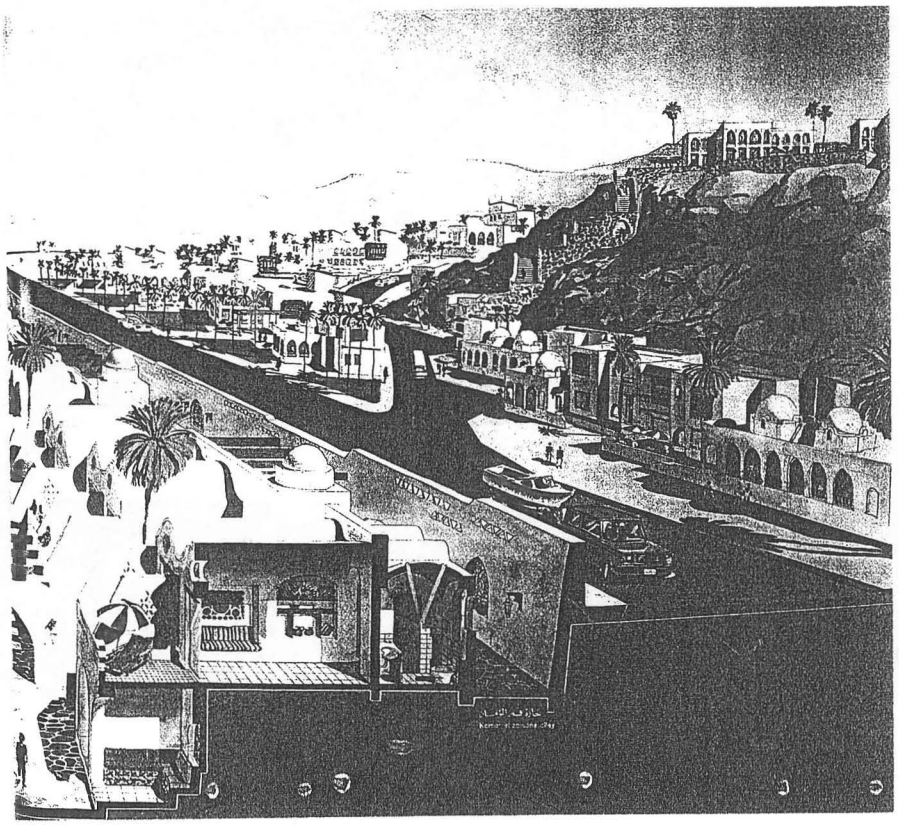
184. Pilot Project House, Luxor, (1978-1980),
by David Sims and Olivier Sednaoui.



185. Swan House, Texas, c. 1999, by Simone Swan.

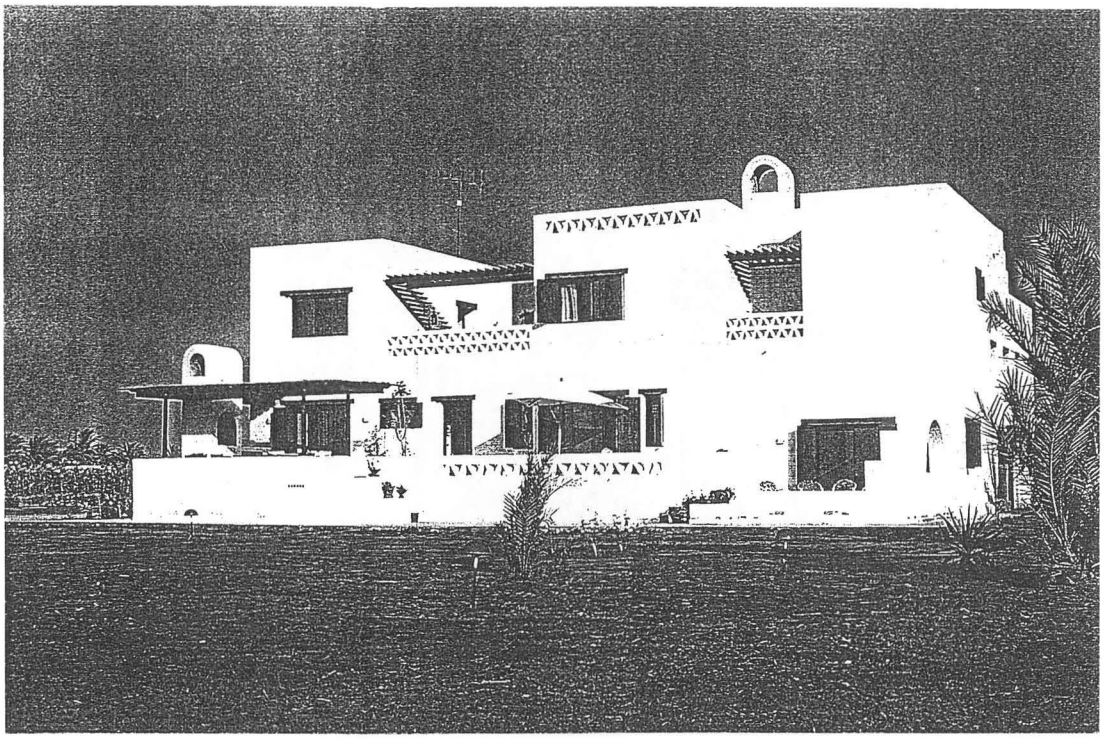


186. Abo Ghueillah Housing project, Amman, Jordan, 1979, by Rasem Badran.



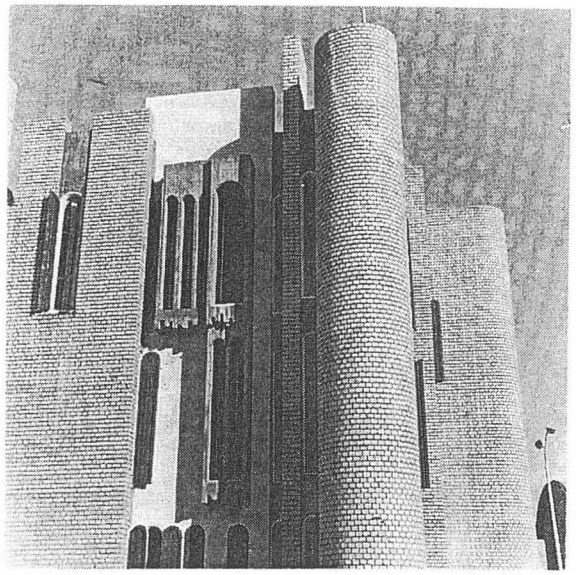
187. Felfela Tourist Complex, Hurghada, Egypt, c. 1990s, by Omar El-Farouk.

188. Hager Al-Dabiya Village, south Luxor, Egypt, c.1990, by Ahmed Abdou.

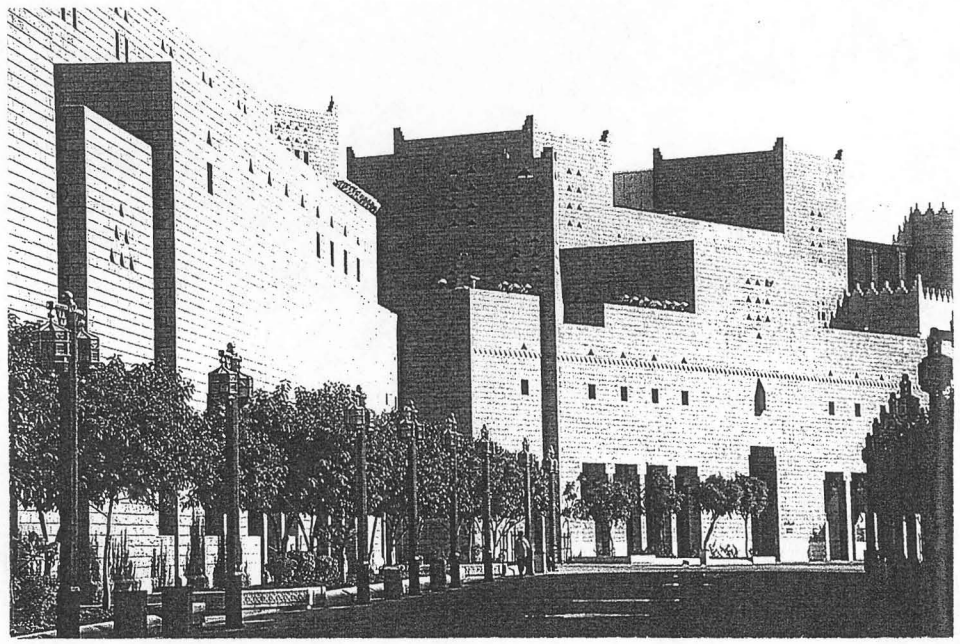


189. Bitter Lakes Villa, Suez Canal, Egypt, 1989, by Mohamed Al-Husseiny.

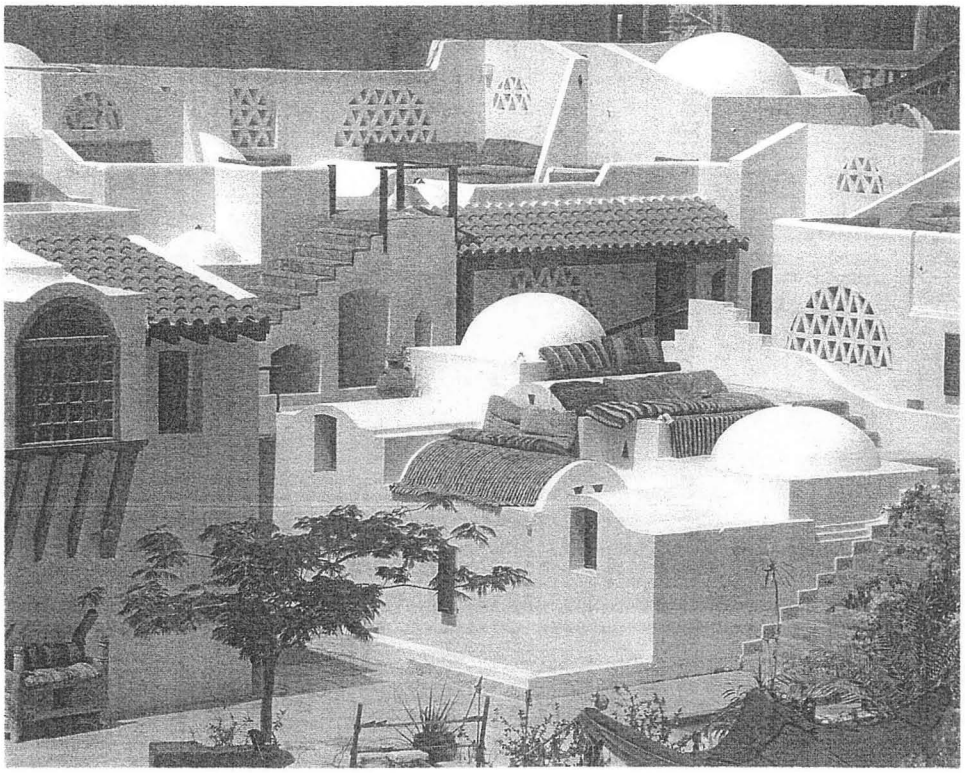
190. Al-Nawras Tourist Village, Ismailia, Egypt, c. 1980, by Abdelbaki Ibrahim.



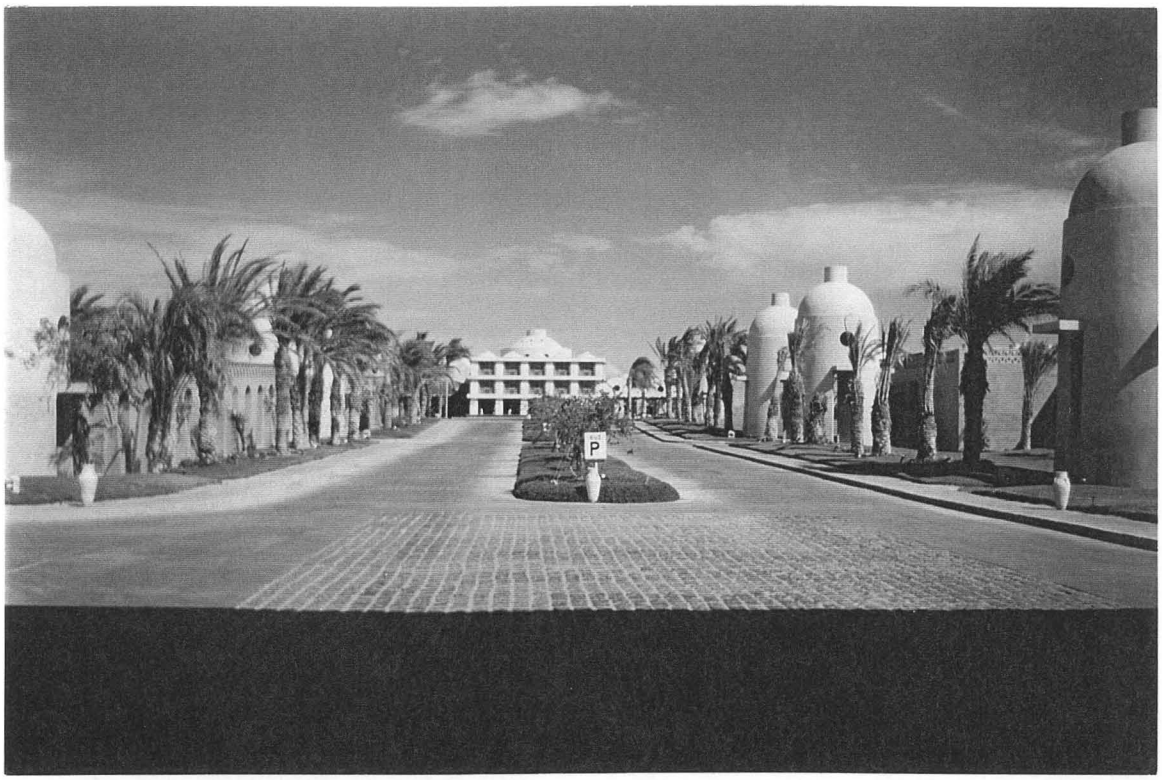
191. Tobacco Monopoly Building, Baghdad, Iraq, 1966, by Rifat Chadirji.



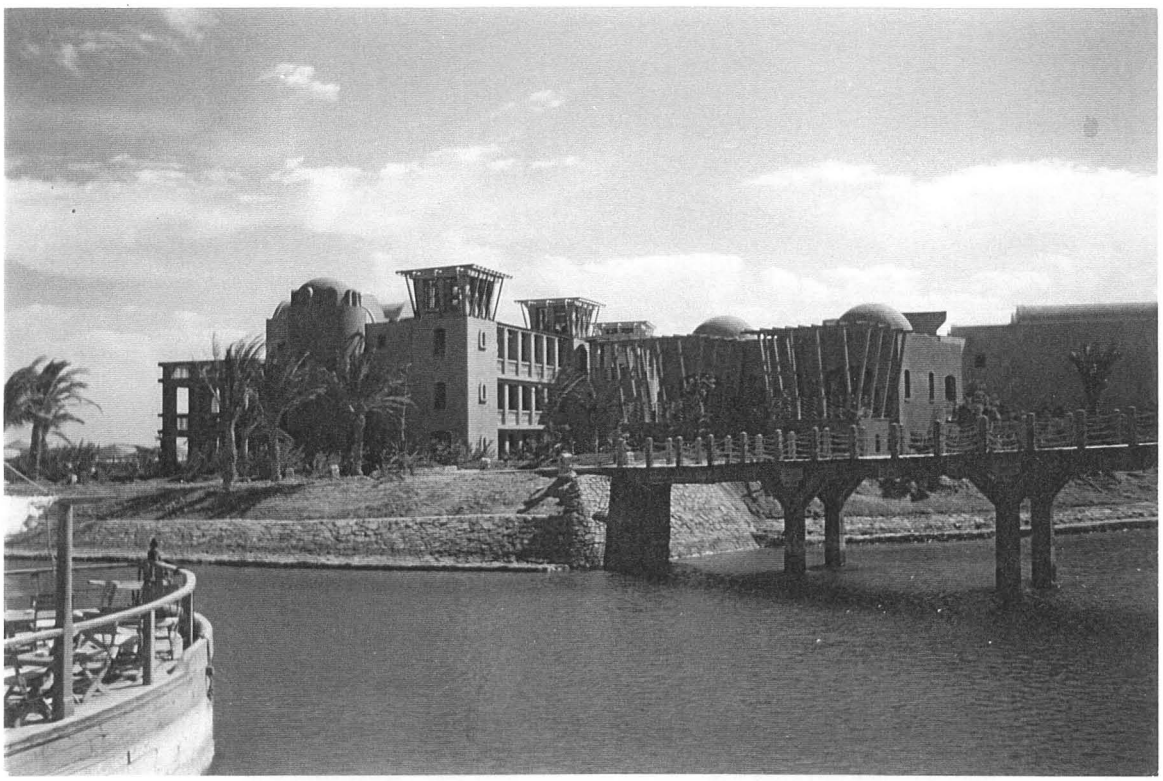
192. Qasr Al-Hakim complex, Riyadh, Saudi Arabia, (1985-1992),
by Rasem Badran.



193. Sanafir Hotel, Sharm El-Sheikh, Egypt, 1986, by unknown architect.

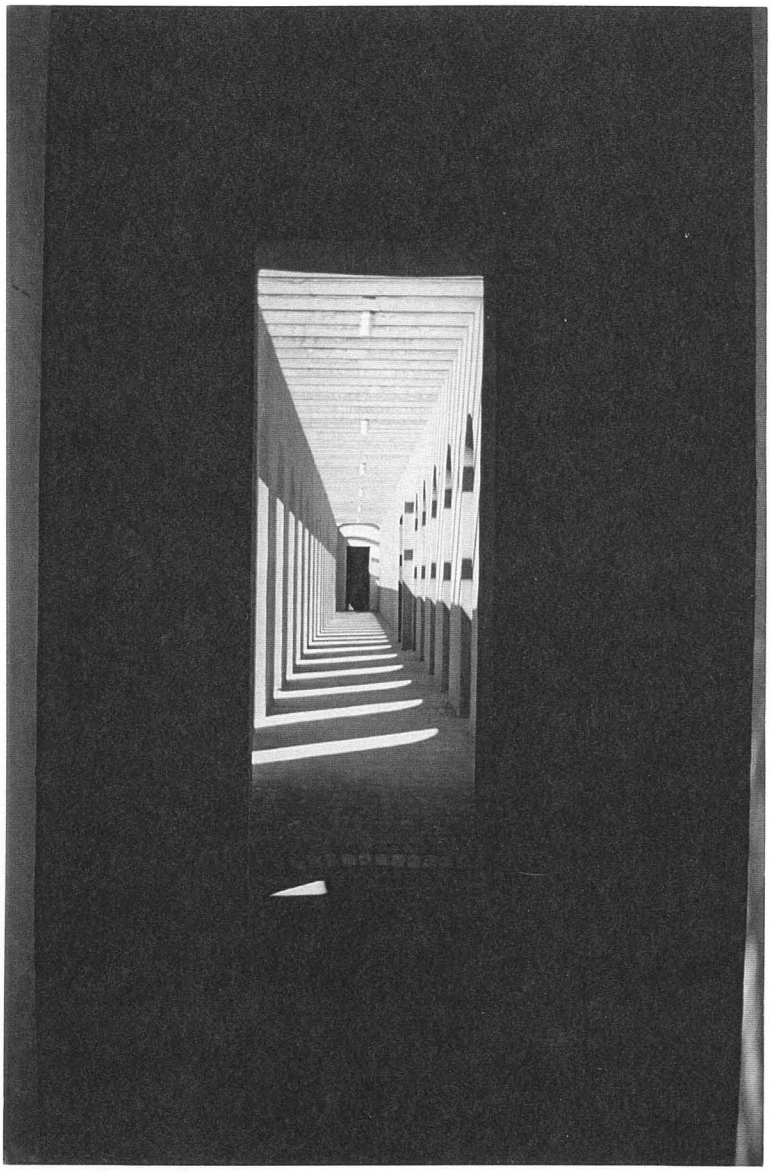


194. Miramar Hotel, Hurghada, Egypt, c. 1997, by Michael Graves,
main entrance of the village.



195. Miramar Hotel, lake view.

196. Miramar Hotel, housing units.



197. Miramar Hotel, arcaded street.